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ABSTRACT

Nine papers are provided from the seminar, which focused on breaking geographic barriers. Presentations include "So--Who Are Your Clients?" (P. Choo, et al.), which examines demand for tertiary education; "Tertiary Manpower Demand Trends in Malaysia: Some Preliminary Observations" (Wong Poh Kam), which includes a discussion of potential roles of private training institutions in labor force development; "Offshore Distance Education--Models" (Patrick Guiton), which suggests a framework for collaboration; "The Northern Ontario Distance Education Access Network: A Model for Collaboration" (Marian Croft), which describes a collaborative model; "Student Support Services--What Do Overseas Students Need?" (Louise Moran, David Edge), which emphasizes an understanding of different cultural and educational contexts; "The Needs of Our Offshore Students" (Stuart Hosking); "Support Services for Distance Education Students" (Jack Foks), which focuses on which services should be provided and how; "Supervision of Teaching and Assessment in an Open Learning Consortium" (D. F. Swift); and "Information and Documentation in Distance Education" (Keith Harry). (YLB)

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Programme

ED290856

A DISTED SEMINAR ON

OFF SHORE DISTANCE EDUCATION

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Office of Educational Research and Improvement
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16 - 20 APRIL 87

PENANG, MALAYSIA

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SEMINAR ON
OFF-SHORE DISTANCE EDUCATION (16-21 APRIL 87)
PENANG, MALAYSIA

BREAKING GEOGRAPHIC BARRIERS

PROGRAMME

Thursday, 16th

10.00 - 11.00 am: Registration & Refreshments.

11.00 - 12.30 pm: Opening Ceremony

Chairman - Datuk Sharom Ahmat

Speakers - His Excellency The Honourable Manfred G. Von Nostitz, The High Commissioner for Canada in Malaysia (Guest of Honour)

- YB Tan Sri Datuk Haji Hamdan Sheikh Tahir

12.30 - 2.00 pm: Lunch.

2.00 - 4.00 pm: Session 1: DEMAND.

Chairman - Dr Keith Harry

Papers - Dr Peter Choo Piang Fong
- Dr Wong Poh Kam

Break for refreshments.

Friday 17th

10.00 - 12.30 am: Session II: MODELS

Chairman - Prof Don Swift

Papers - Mr Patrick Guiton
- Ms Marian Croft

12.30 - 2.00 pm:: Lunch

2.00 - 3.00 pm: Session III: SUPPORT

Chairman - Mr Christopher W Smith

Papers - Ms Louise Moran
- Mr Stuart G Hosking
- Mr Gary Edwards

Break for refreshments.

Saturday 18th

10.00 - 12.30 am: Session IV: ETHICS

Chairman - Associate Prof Zainal Datuk Ghani

Papers - Prof Don Swift
- Mr Shannon Timmers

12.30 - 2.00 pm: Lunch

2.00 - 5.00 pm: Session V: ADMINISTRATIVE SUPPORT SYSTEMS FOR DISTANCE EDUCATION MANAGEMENT

Chairman - Mr Stuart G Hosking

Hands-on demonstration of Mircrodetrems by Mr Peter Daily

Break for refreshments.

Sunday, 19th — FREE

7.30 - 9.30 pm: DISTED Reception

Monday, 20th

9.00 - 10.00 am: Session VI: INFORMATION NEEDS

Chairman - Ms Louise Moran
Speaker - Mr Keith Harry

10.00 - 12.00 pm: Session VII: CO-OPERATION & WRAP-UP

Chairman - Dr G Dhanarajan

Speaker - Mr Shannon Timmers

12.15 - 1.00 pm: Closing

Chairman - Prof Dr Francis Morsingh

Speaker - Dr Koh Tsu Koon

OFF-SHORE DISTANCE EDUCATION SEMINAR, PENANG
APRIL 16-21, 1987

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SO - WHO ARE YOUR CLIENTS?[1]

by

P. Choo*, G. Dhanarajan*, A. Lourdusamy*,
Zainal Ghani*, Lee E.K.*

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1 Materials presented are partly derived from research supported by University Science Malaysia and the International Development and Research Centre through Grant No. 3-P-84-0314.

* Academic and Research Staff of USM

INTRODUCTION

The provision of post secondary or tertiary education has primarily been the responsibility of the government. This is especially true for education at the university level. Over the last few years there has been a rapid rise in the demand for university education. For example, in 1980, there were about 20,018 students enrolled in local government institutions. By 1985, this number increased by 71.3% to 34,000 students and the total number of students projected for 1990 is 56,358 - a 64.3% increase over 1985 (Table 1).

There is also a corresponding increase in the demand for post secondary diplomas. In 1980, there were 12,262 students enrolled for diploma courses in government institutions. By 1985, this number increased by 104.3% to 25,046 students and the total number of students projected for 1990 is 45,484 students - an increase of 81.6% over 1985 (Table 2).

These figures do not include either students who have been sent overseas on scholarships or private students.

The two main purposes of this paper are:

(a) to examine the patterns of demand for tertiary education at both the diploma and degree levels.

(b) to provide a description of students who are currently enrolled in the off-campus programme in USM.

TRENDS IN TERTIARY EDUCATION 1985-1990

A number of trends in the demand and provision of tertiary education can be observed for the next few years.

(a) The conventional/traditional provisions for post secondary education will not be sufficient to meet the increasing number of qualified students. The number of students who sat for the SPM (MCE) examination in 1985 amounted to 153,817 of which 100,788 (65.5%)[1] passed with a full certificate. For 1985, only 34,000 (Table 1) students (33.7%) enrolled for diploma courses in local government institutions.

We get a similar picture when the percentage of qualified students who get accepted into local universities are studied. In 1986, there was a total of 71,251[2] STPM candidates. Of these 54.3% or 38,772 candidates secured passes in at least 2 principal subjects. (This allows them to apply for university education). For the academic year 1987/88, only 9,200 (25.5%) of the 38,198 candidates eligible for admission will be accepted into local universities.

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1 Utusan Malaysia, 29 March 1986.

2 Berita Harian, 20 March 1987.

(b) Changing trends in enrolment for degree programmes

For purposes of this paper, the three broad categories of degrees are: arts degrees, which includes arts and humanities, economics, business and law; science degrees which include medicine and dentistry, agriculture, pure sciences; and technical degrees, such as engineering, architecture, town planning and surveying. The relevant data on enrolment for degree programmes in local government institutions are given in Table 1.

(i) Arts degrees: In 1985, 50% of the total university enrolment was in the arts faculties but it is anticipated that by 1990, only some 48.7% of the total university enrolment will be in these areas. A more detailed analysis suggests, however, continued strong demand in the areas of economics, business and law. The main decline in student interest is in the arts and humanities.

(ii) Science degrees: The percentage of university students who will take degrees in the science disciplines will steadily decline from 40.2% in 1980 to 36.4% and 31.5% in 1985 and 1990, respectively. This decline will be particularly strong in the pure and agricultural sciences.

(iii) Technical degrees: In contrast to science degrees, the percentage of university students who will take technical degrees will steadily increase from 11.2%

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in 1985 to 13.6% and 19.8% in 1985 and 1990 respectively. There will be strong demand for engineering degrees so that by 1990 there will be a 151.7% increase in student enrolment as compared to 1985. In terms of numbers, the 3,662 students taking engineering in 1985 will increase to 9,219 by 1990.

Although the number of students (about 584 by 1990) taking property management degrees will be small, the growth in demand in this area will be very strong.

(c) There will be important changes/trends in the demand for diplomas in the arts, sciences and technical areas. The enrolment for diploma programmes in local government institutions are presented in Table 2.

(i) Arts. Compared to 1980, the number of students taking diplomas in the arts areas in 1985 increased by 159.3%. The demand for such diplomas, however, will slow down by 1990.

(ii) Science. 1985 was a bad period for science with only marginal increases in enrolment compared to 1980. The percentage of students taking all diploma courses who will enrol in science declined from 26.7% in 1980 to 20.5% in 1985. There will, however, be a 98.1% increase in students in 1990 compared to 1985 mainly in the areas of computer studies, applied sciences and mathematics.

(iii) Technical. Overall the demand for technical diplomas will show a significant increase between 1985 and 1990. For example, by 1990 the number of students taking engineering diplomas in building technology, automative technology and electronic technology will increase by 120.6% compared to 1985. Similar increases being projected for architecture and town planning and for surveying.

(d) The projected number of students who will enrol for diplomas in government institutions is 45,484 while 56,358 will enrol for degrees by 1990. This is in contrast to the corresponding figures of 25,046 and 34,000 in 1985.

The above trends and projections are based on data on actual and projected enrolments in government institution provided by the Ministry of Education.[3] It should be noted that the number of places in most programmes are limited.

(e) In 1985, 15,761 students (38.62%) out of a total of 40,807 will enrol in local private (10,023) and overseas institutions (5,738) for diploma courses. The enrolment for government and private institutions are provided in Table 3.

(f) At the degree levels in 1985, an additional 22,684 will enrol in institutions overseas. Compared with 1980, this was only a 56% increase.

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[3] Source: Fifth Malaysia Plan

The demands for tertiary education appear to be increasingly difficult to meet within existing local government institutions. Currently, Universiti Sains Malaysia (USM) provides an off-campus programme primarily for mature learners. The next section describes some of the characteristics of students who are accepted into this programme.

CHARACTERISTICS OF OFF-CAMPUS STUDENTS IN USM

The analysis in this part of the paper is based on a 50% stratified random sampling of the off-campus students in USM. Stratification was on the basis of study centres and discipline areas. A total of 690 students formed the sample. The rest of the paper will describe these off-campus students along five broad dimensions, namely, demographic, personality, self-concept, (cognitive style and locus of control).

GENERAL CHARACTERISTICS

An examination of the sample indicates that the 57% are Malays, 28% Chinese and 10% Indians. Only about 18% of the total sample are females and the majority (53%) of the sample at the time of the study was aged between 26-30. About 70% of these students are married and about 65% were originally from the rural area. But currently only about 36% are still in the rural area.

Nearly all the students (94%) are from the government sector mainly holding jobs as teachers (55.4%) and administrators and management personnel (25%).

In terms of income, some 87% of these off-campus students were earning M$500-M$1000 per month.

The majority of the students (60%) entered the programme on the basis of a full HSC/STPM certificate.

(a) Personality

Personality was measured through Cattell's 16PF Personality Inventory which consists of 187 items. Each of the sixteen subscales has between ten to twelve items.

Table 4 presents the means for each of the sixteen personality factors for the female and male subsamples used in this study. For comparison purposes, the corresponding values for college students in the United States are provided in brackets.

(i) Female off-campus students: A 't' test of the differences between the USM means and the means for the norm group showed that there were significant differences along ten of the sixteen personality factors (see Table 4). The trend of these differences indicate that female off-campus students in USM tend to be relatively:

- more reserved, critical, detached and alorf versus outgoing, easygoing and participating (Factor A).
- more bright, intelligent and abstract thinkers as opposed to slow to learn and grasp, concrete thinkers (Factor B).

- more emotionally unstable or affected by feelings (Factor C).
- more serious and taciturn as opposed to impulsive lively and enthusiastic (Factor F).
- more suspicious hard to fool as opposed to trusting, easy to get on with (Factor L).
- more practical, down to earth versus imaginative and absent-minded (Factor M).
- more shrewd, worldly and calculating as opposed to artless, forthright (Factor N).
- more worrying and apprehension as opposed to self-assured and confident (Factor O).
- more self-sufficient and independent compared to group dependent and sound follower (Factor Q2).
- more controlled and self-disciplined compared to careless, undisciplined (Factor Q3).

when compared to the norm groups consisting of 1,021 in U.S. female college students.

(ii) Male off-campus students

A similar comparison was made between the U.S. norm group of 1,105 male U.S. college students and the USM male off-campus students. The results presented in Table 5 revealed that significant differences exist between the two groups along nine of these sixteen dimensions or factors. The trend of the differences indicate that the male off-campus students in USM

tend to be relatively:

- more warmhearted and participating as opposed to detached, cool and critical (Factor A).
- more intelligent and abstract thinkers versus less intelligent and concrete thinkers (Factor B).
- more emotionally unstable or affected by feelings versus emotionally stable, mature and faces reality (Factor C).
- more submissive, humble, mild and accomodating as opposed to assertive, independent, competitive and stubborn (Factor E).
- more serious and taciturn as opposed to happy go lucky and lively enthusiastiic (Factor F).
- more conscientious and perservering (Factor G).
- more dependent, overprotected and sensitive versus self reliant, realistic (Factor I).
- more controlled and self-disciplined versus undisciplined (Factor Q3).
- more relaxed and tranquil versus tense and frustrated (Factor Q4).

(b) Self-concept

The Tennessee Self-Concept Scale was used to measure the student's concept of themselves. This test consists of 100 descriptive items based on aspects of self such as self-satisfaction, physical self, personnel self, social self, self esteem and self criticism.

Table 6 presents the means for the twelve subscales used in this study together with the results of a comparison between these means with the normative data reported by Fitts (1965).[4] This norm group of 626 was a U.S. sample drawn from various parts of the country with ages ranging from 12 to 68 with approximately equal numbers of both sexes, Black and White subjects, representing all educational, social and economic levels.

Significant differences exist along nine of the twelve scales. An analysis of the trends of these differences indicate that compared to the general U.S. population, off-campus students in USM tend to have a significantly lower overall self concept as measured by the self esteem scale. More specifically, off-campus students in USM:

- score lower on the identity scale which describes how he perceives his basic identity, that is, what he is as he sees himself (self awareness).
- have a lower perception on their behaviour or actions or the way they function.
- have a lower perception of their own physical condition such as state of health, physical appearances, skills and sexuality.

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4 Fitts, W. Manual for the Tennesee Self-Concept Scale: Nashville, Counsellor Recording, Abstracts, 1965.

- tend to report a lower perception of the moral-ethnical aspects, especially with reference to moral worth, relationship to God, feelings of being 'good' or 'bad' and satisfaction with one's religion or lack of it.
- have a lower perception of himself with reference to his closest and most immediate circle of associates, that is, his feeling of adequacy, worth and value as a family member.
- tend to have a lower self concept with respect to his sense of adequacy and worth in his social interaction with other people in general.
- are less open to criticism and tend to be more defensive.
- score higher on the personal self dimension which reflects the respondent's senses of personal worth, his feeling of adequacy as a person (apart from his body and his relationship to others)

These are indications from the total conflict scale that USM off-campus students tend to be inconsistent in their responses to positive and negative items in the same dimension. This may mean that there is a tendency to acquiesce or deny in responding to the scale.

CONCLUSION

It is difficult to draw conclusions about the characteristics or learning style or behaviour of Malaysians on the basis of our study. For one, our subjects are not quite random of the Malaysian population. They are a sample from a cohort of students who have been selected (on the basis of complex criteria) by a rigid admission system. However some of the traits they exhibit is to date the only ones that have come out of any study on Malaysian adult learners at a distance. It therefore seems to us, that this audience has to recognise these features when planning to deliver their courseware here in Malaysia.

It will be fairly obvious to anybody who has studied the demography of this country that is made up of a very young population and educational provisions have to be a major concern of the government in power. Projections published in the various plans also indicate that whereas pre university education will be made universally available by the end of the decade, opportunities for university education will be woefully short. Endogenously developed open or distance education, certainly is a logical route. But the current political climate may not allow for such a development. This leaves the door open for off shore providers. One gets the impression that the Malaysian government is desireous of encouraging privatised education under controlled conditions. Current legislation does not stop off shore programmes from being imported into the country. However, this

situation may not be allowed to continue unless off shore providers and or their "agents" denonstrate an ability to provide quality and caring education suited to the (learning) needs of the Malaysian. What this conditions will be, we think, will be determined by the consumer and his safeguard. In the meantime it seems best that any planning by off shore providers must take into account factors like good quality instruction, sensitivity to political and cultural idiosyncracies, accredition and recognition, similarity of standards between onshore and offshore offers, interchangeability of modes (off-on-off campus), assurance of continuity and realistic costing.

Table 1: Enrolment for Degree Programmes in Local Government Institutions (1980 - 1990)

Degree Type	Enrolment			% Increase	
	1980	1985	1990	81-85	86-90
Arts	9727 (48.6%)	17121 (50.0%)	27476 (48.7%)	- 76.0	- 60.5
Science	8046 (40.2%)	12505 (36.4%)	17748 (31.5%)	55.4	41.9
Technical	2245 (11.2%)	4674 (13.6%)	11134 (19.8%)	108.2	138.2
Total	20018 (100%)	34000 (100%)	56358 (100%)		

Source: Figure extracted from 5th Malaysia Plan (1985-90).

Table 2: Enrolment for Diploma Programmes in Local Government Institutions (1980 - 1990)

Degree Type	Enrolment			% Increase	
	1980	1985	1990	81-85	86-90
Arts	5063 (41.3%)	13126 (52.4%)	19744 (43.4%)	- 159.3	- 50.4
Science	3279 (26.7%)	5133 (20.5%)	10167 (22.4%)	56.5	98.1
Technical	3920 (32.0%)	6787 (27.1%)	15573 (34.2%)	73.1	129.5
Total	12262 (100%)	25046 (100%)	45484 (100%)		

Source: Figure extracted from 5th Malaysia Plan (1985-90)

Table 3: Enrolment in Tertiary Education in Local and Overseas Institutions

Type of Tertiary Education	Enrolment			% Increase	
	1980	1985	1990	81-85	86-90
CERTICATE (Total)	(11958)	(34948)	(14353*)	192.2	-
(a) Govt.	2603	6878	14353	164.2	108.7
(b) Local Private	4092	21957	N/A	436.6	-
(c) Overseas	5263	6113	N/A	16.2	-
DIPLOMA(Total)	(23183)	(40807)	(47226)	76.0	-
(a) Govt.	12262	25046	47226	104.3	88.6
(b) Local Private	5968	10023	N/A	68.0	-
(c) Overseas	4953	5738	N/A	15.8	-
DEGREE(Total)	(41454)	(60522)	(65413)	46.0	-
(a) Govt.	21944	37874	65413	72.6	72.7
(b) Local Private	-	-	-		
(c) Overseas	19510	22648	N/A	5.6	

Source: Figure extracted from 5th Malaysia Plan (1985-90) Table 19-3, pp.490.

Table 4: 16PF Means and Standard Deviation: Females

Factor	Means	Standard Deviation	't' test
A	10.53(11.76)	3.04(3.56)	$p < .001$
B	8.86(7.72)	1.92(1.80)	$p < .001$
C	12.86(14.77)	4.45(3.94)	$p < .001$
E	11.50(10.69)	3.73(3.90)	NS
F	9.32(15.36)	3.65(4.43)	$p < .001$
G	13.42(12.88)	3.50(3.45)	NS
H	10.84(12.31)	5.15(5.12)	NS
I	11.60(11.76)	3.47(2.99)	NS
L	9.02(7.59)	2.72(3.07)	$p < .001$
M	11.48(12.46)	3.17(3.46)	$p < .001$
N	11.70(10.43)	3.08(2.76)	$p < .001$
O	12.17(10.61)	4.14(3.77)	$p < .001$
Q_1	8.34(8.64)	2.40(2.86)	NS
Q_2	11.15(9.69)	3.07(3.48)	$p < .001$
Q_3	13.03(10.63)	3.02(2.95)	$p < .001$
Q_4	12.57(12.80)	5.05(4.91)	NS

Bracketted values are the norms of female college students reported on the manual.

Table 5: 16PF Means and Standard Deviation: Males

Factor	Means	Standard Deviation	't' test
A	10.82(9.80)	2.64(3.43)	$p < .001$
B	8.65(7.72)	2.02(1.80)	$p < .001$
C	13.89(15.50)	3.71(3.69)	$p < .001$
E	11.99(13.94)	3.45(3.92)	$p < .001$
F	9.88(15.74)	3.14(4.40)	$p < .001$
G	14.34(12.73)	2.66(3.60)	$p < .001$
H	12.92(13.01)	4.96(5.24)	NS
I	9.81(8.79)	2.87(3.49)	$p < .001$
L	9.51(9.47)	3.06(3.13)	NS
M	12.10(11.68)	3.16(3.41)	NS
N	10.69(11.07)	2.70(2.63)	NS
O	11.09(10.65)	3.65(3.90)	NS
Q_1	9.31(9.64)	2.64(2.75)	NS
Q_2	10.44(9.97)	3.13(3.50)	NS
Q_3	13.99(10.14)	2.73(3.07)	$p < .001$
Q_4	10.33(12.01)	4.75(4.81)	$p < .001$

Bracketted values are the norms of male college students reported on the manual.

Table 6: Self Concept: Means and Standard Deviation

Scale	Means	Standard Deviation	't' test
1. Identity	123.17(127.10)	11.30(9.96)	$p < .001$
2. Self Satisfaction	104.22(103.67)	10.96(13.79)	NS
3. Behaviour	112.87(115.00)	11.10(11.26)	$p < .001$
4. Physical Self	68.97(71.78)	7.53(7.67)	$p < .001$
5. Moral Ethical Self	68.21(70.33)	6.22(8.70)	$p < .001$
6. Personal Self	68.57(64.55)	7.80(7.41)	$p < .001$
7. Family Self	68.86(70.83)	5.76(8.43)	$p < .001$
8. Social Self	65.68(68.14)	6.97(7.86)	$p < .001$
9. Self Esteem	338.92(345.57)	27.89(30.70)	$p < .001$
10. Total Concept	41.60(30.10)	11.97(8.21)	$p < .001$
11. Total Variability	46.14(48.53)	11.26(12.42)	NS
12. Self Criticism	29.21(35.54)	5.82(6.70)	$p < .001$

Bracketted values are those of the norm group reported by Fitts (1965)*

*Fitts, W; Manual for the Tennessee Self-Concept Scale, Nashaville: Counsellor Recordings and Test, 1965.

Tertiary Manpower Demand Trends in Malaysia: Some preliminary Observations

by:

Dr Wong Poh Kam

Research Director,
SERES Sdn. Bhd.

April, 1987

1. Introduction

The aim of this paper is to highlight certain salient features of tertiary manpower requirements in Malaysia in the medium term, and to assess the potential roles that private training institutions can play in tertiary manpower development.

The paper is organized as follows. Section 2 provides a brief overview of the major factors that influence manpower demand and supply in Malaysia. Section 3 then examines the recent past and likely future trend of tertiary manpower demand and supply in Malaysia over the next 5-10 years. In Section 4, we examine briefly the implications of the above findings for tertiary manpower training demand in Malaysia. We conclude in Section 5 by highlighting several implications from the above analysis concerning the likely role of private tertiary manpower training.

2. Overview of Factors determining Manpower Demand and Supply

From an economic viewpoint, manpower development can be broadly defined as a process whereby the human resources of a nation are mobilized and equiped with the relevant skills to best meet the requirements of economic production activities of the nation. Figure 1 summarizes the relevant role of manpower development in affecting the nature and characteristics of the manpower supply to match the manpower demand generated by economic growth.

As Figure 1 makes clear, the pattern of manpower demand is influenced by :

- the aggregate level and growth rate of economic activities : a faster growth rate, inter alia, would translate into a higher manpower demand growth rate;
- the structural shift in the sectoral composition of economic activities : changing sectoral structure of production translates into expansion of some occupational categories and shrinkage of other types of manpower utilization;
- the pace of technological development in each specific sectors : changing capital-labour ratios and skill content corresponding to different technologies of production further modifies the level and skill mix of manpower requirements.

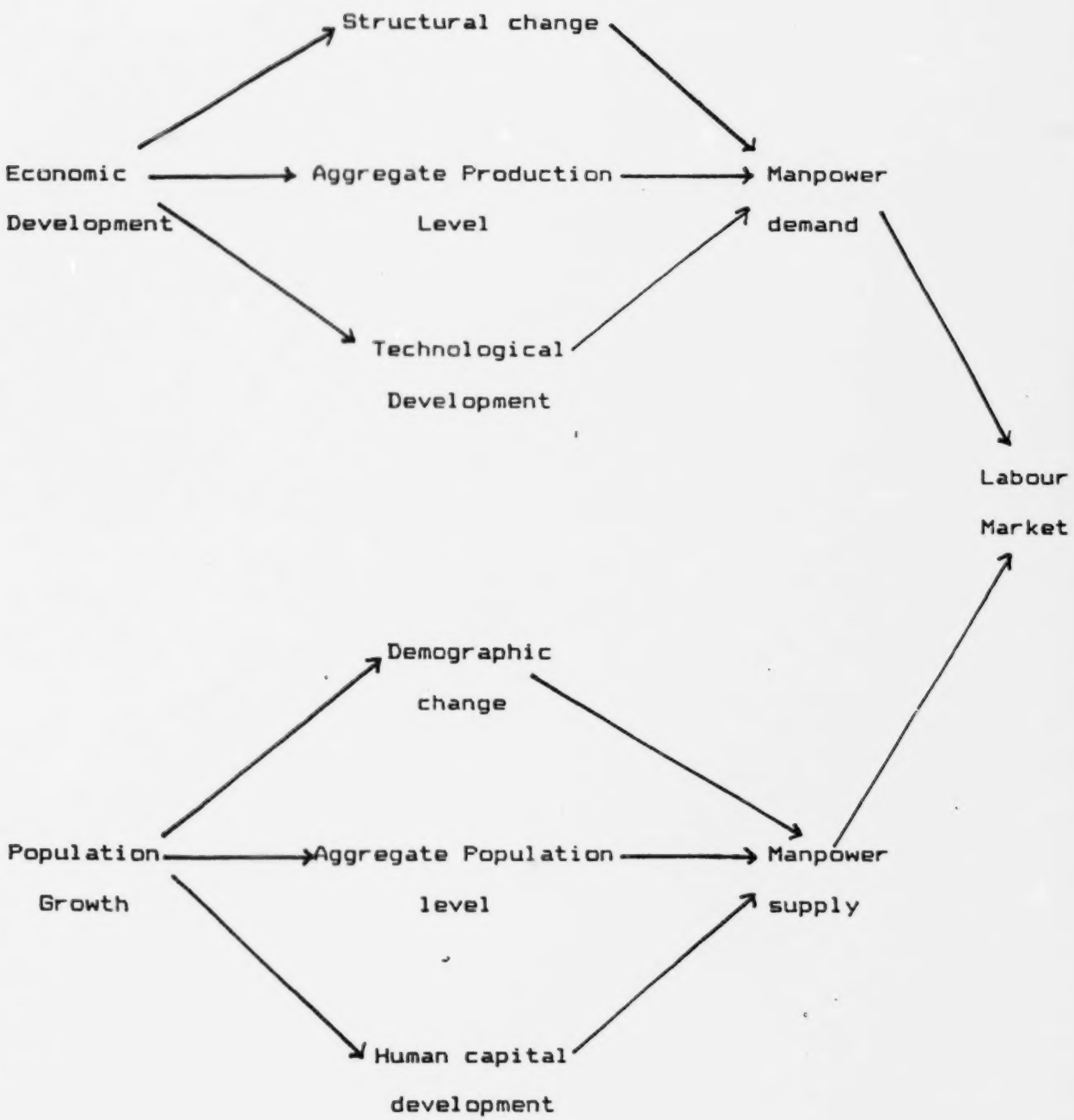
On the supply side, the pattern of manpower supply is determined not only by the aggregate population growth rate, but also by :

- changes in the demographic structure : changing age-structure affects the proportion of working age groups within the total population, while changing labour force participation rates further modify the net labour force supply;

- the pace of human capital development : the skill mix of the manpower supply is constantly modified by changing trend in education and training as well as on-the-job learning.

Figure 1 also highlights the fact that, equilibrating of manpower supply with manpower demand is a complex process mediated largely through a competitive labour market. While the level and pattern of manpower demand can fluctuate quite a bit over a short period due to business cycles and secular trend in the economy, the pattern of manpower supply is often inelastic in the short-term, given that demographic characteristics change slowly and new skill acquisition or re-training incurs significant time lag. Hence, the problem of manpower mismatch tends to occur from time to time. This perspective helps us to better understand the pattern of alternating labour surplus and shortages in Malaysia over the last two decade or so (see next section).

Figure 1. Determinants of Manpower Demand and Supply



3. Review of Manpower Demand and Supply Trend, 1970-85 and Assessment of Likely Trend 1985-1990

3.1 Aggregate Manpower Demand and Supply Trend and Outlook

Table 1 summarizes the aggregate manpower supply and demand trend in Malaysia over 1970-1985. As can be seen, on the supply side, while overall population growth rate has stayed almost constant at 2.6% p.a., the working age-group share of total population has risen steadily. Consequently, the growth rate of the working-age population has been consistantly higher at about 3.3% p.a. Labour force participation (the proportion of working age population actually looking for work) kept pace with the growth of working age population over 1970-80, but slowed down to 3% p.a. over 1980-85.

On the demand side, the Malaysian economy experienced an unprecedented boom in the 1970s (especially in the second half), with an aggregate real GDP growth of 7.8% over the decade 1970-80 (see Table 2). This resulted in a rapid increase in employment demand over 1970-80; while the actual achieved employment growth rate was 3.5% p.a., the potential demand for labour was in fact higher. This has resulted in significant labour shortages developing towards the end of the 1970s, and a rapid increase in wage and salary levels for a broad spectrum of occupations. Unemployment rate also declined from over 8% in the late 1960's to less than 6% by 1980. Were it not for the problem of labour mismatch, the unemployment rate would have undoubtedly declined much more. Most of the unemployed in the late 1970s consisted of young school leavers chasing white-collor occupations and shunting manial work in plantations and factories which experienced labour shortages.

The "golden" decade of the 1970s could not be sustained into the 1980s, however, due to the fact that much of its growth dynamism was buoyed not by industrial deepening, but by primary commodity export booms. In fact, the primary export bonanzas helped delayed the move towards greater industrialization and restructuring to achieve economic diversification and international competitiveness as have been achieved by other NICs (Taiwan, Hong Kong, Singapore) in the mean time. Instead, resources were overly channeled into the property market, the construction sector, the public sector, as well as into high consumption of imported luxury goods.

As a result, the economy was not prepared to face the sharp decline in primary commodity export earnings in the 1980s. The public sector went into severe deficits and had no choice but to cut back drastically. The property market and construction industry virtually collapsed since 1985. The manufacturing sector, which remains underdeveloped and uncompetitive, could not expand rapidly enough to take up the short-fall. The commerce and services sector, which are dependent on other basic production sectors of the economy, similarly slowed down significantly.

Against this back-drop, aggregate employment creation slowed to only 2.6% p.a. over 1981-85, slower than aggregate manpower supply over the same period. Consequently, unemployment rate rose to 8.6% of the labour force by 1985. The situation has further worsened in 1986 and 1987.

Over 1986-1990, the Government in its fifth Malaysia Plan (5MP) has forecasted that the economy would continue on a moderate growth path, with a real GDP growth p.a. of 5% and a concommittant manpower demand growth rate of only 2.3% p.a. Since the working age population and labour force are expected to continue to expand at 2.8 - 2.9% p.a. over the same period, the excess manpower supply would result in growing unemployment (reaching 10.1% by 1990).

In view of the poor performance of the economy over 1986-87 (see Table 2), it is unlikely that even such a moderate growth scenario could be achieved. A more likely overall real GDP growth rate over 1986-1990 is around 3%, with manpower demand slowing down even further.

3.2 Tertiary Manpower Demand and Supply Trend

The above aggregate manpower demand trend can be further analyzed in terms of sectoral breakdown, and subsequently, in terms of occupational breakdown. These are summarized in Table 3 and 4. The statistics in Table 3 basically reflects the analysis presented earlier : while employment in agriculture declined relatively from over 50% in 1970 to 36% in 1985, manufacturing took up less than one-third of this gap, while construction, utilities/transport and government services together achieved a relative increase of nearly 8%. Commerce and finance made up the rest of the relative increase.

The impact of the above sectoral change in manpower demand can be seen in the changing occupational structure of the

country (see Table 4). Since a large proportion of teatiary-trained manpower falls under the "professional and technical" and "administrative/managerial" groups, it is instructive to examine the growth trend of these occupational groups.[1]

Over 1970-1980, the professional and technical group as a whole achieved an average growth rate of 6% p.a., 1.7 times the overall employment growth rate . Over 1980-85, the growth of this occupational group has moderated to 4.4% p.a., but it is still 1.7 times the average growth rate of the total employment growth rate. Indeed, data on specific higher professional categories within this occupational group indicate an even higher average growth rate of 11-12% p.a. (see Table 5). For example, registered engineers increased by 22% p.a. over 1970-80 and 13.8% p.a. over 1980-84; the corresponding figures for accountants are 10.17% p.a. and 18.9% p.a respectively.

In Table 4, the growth of the "administrative and managerial" group was indicated as only 3.4% p.a. over 1970-80, about the same as overall employment growth. This is however, misleading in that this occupational group as defined by the Department of Statistics does NOT include managers in the commerce and service sectors (they are classified instead as beloging to the sales and service occupational groups). Neither does it include executive government officers (Div. A) who are not administrative heads; they are instead put in the clerical group. Table 6 shows the available statistics for these excluded occupational categories as well as other "higher" occupational categories which are likely to be filled by tertiary-trained manpower. As can be seen, the number of executive government officers increased by 10.9% p.a. over 1970-80, while the other occupational groups all show above average growth rate (5.7-9.9% p.a.).

Simalar breakdown of occupational growth is not available for the period 1980-85, but the above average trend is likely to have persisted for these higher occupations. Indeed, the "administrative and managerial" group as originally defined was estimated to grow at 3.8% p.a. over 1980-85, 1.5 times the overall average. A large part of this is accounted for by the public sector, the cutback in the government sector notwithstanding. As Table 7 indicates, the number of Div. A officers increased at 8.7% p.a. over 1981-85, compared to only 5.9% for all divisions.

Over 1986-1990, the 5MP forecasts that the growth of the tertiary training-based occupations will slow down proportionately more than the overall slow down in manpower demand

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in the economy, although these occupational groups will still achieve above average growth. For example, professional and technical manpower demand as a whole is expected to slow to 2.6% p.a. over 1986-90, just 1.13 times higher than overall manpower demand growth. The slow down will be particularly severe in the public sector. Already, as shown in Table 7, Division A staff in-take has been reduced to less than 4% by 1985 vs. 15.2% in 1981. With increasing privatization, a policy the government appears firmly committed to, there will be greater reduction in government absorption of professional/technical manpower in the near future. As an indicator of this slowdown in professional manpower demand relative to supply, the number of registrants at the Ministry of Labor's Professional Employment Bureau rose from 457 in 1980 to 1,580 in 1985.

3.3 Manpower demand and supply outlook beyond 1990

While no official government forecast of manpower demand is available beyond 1990, it can be said that the government now critically realizes the importance of accelerating industrialization to more fully absorb and utilize the projected growth in labour supply over the next couple of decades. Indeed, it is partly in this context that the government has recently prepared (with the assistance of UNIDO and local consultant/academicians) a national Industrial Master Plan (IMP) for implementation over 1986-1995. To a significant extent, the outlook of manpower demand generation over the next 10 years depands crucially on how and whether the IMP can be implemented successfully.

The basic thrust of the IMP strategy is to promote export-led industrialization through the attainment of an internationally competitive labour productivity and labour cost mix. Another prong of the IMP is to promote and rationalize industries that optimize the utilization of natural resources where the country enjoys comparative advantages. In either case, the IMP calls for the mobilization of 3 principal human resource factors that it identifies as critical :

- local R & D personnels specializing particularly in selected key industrial sectors identified by the IMP (e.g. rubber products, electronics, wood-based proudcts etc.);
- substantial numbers of engineers and technicians with advanced skills appropriate to the manufacturing sector;
- supply of production workers at labour productivity and

cost levels that ensure competitiveness and product quality for the export market.

These 3 factors are clearly not independent. R & D effort will influence the nature of technical processes and products and thus the skill requirements of future industry. Productivity will depend in large part upon an appropriate balance of engineers and technicians with production workers on the shop floor.

The IMP has presented a series of recommended government policies and action programmes to promote the optimal mobilization of these 3 critical manpower resources. To the extent that these policies and programmes are successfully implemented, we can expect a significant shift in the pattern of manpower demand, especially that at the tertiary training-based occupational levels. For example, the IMP has correctly noted that the country currently has a mismatched engineering manpower structure : there is a preponderance of civil engineers and public utility engineers but a shortage of experienced industrial engineers and other engineers in specific manufacturing fields. While engineers and technicians constitute only 2.4% of Malaysia's manufacturing workforce in 1980, the corresponding proportion is 6.1% in the USA (1970), 6.5% in Germany(1970), 8.4% in Sweden (1970) and 5.5% in the U.K (1970). The scope for expansion of industrial employment of engineers and technicians is therefore significant provided that the industrial growth envisioned by the IMP can be achieved. Indeed, the IMP has targetted an increase in the number of engineers and technicians in manufacturing industry from 12,300 in 1985 to 53,400 in 1995, i.e. an increase of 15.9% p.a. on average.

Similarly, while the country currently devotes less than 0.5% of its GNP on R & D, the IMP envisages that R & D funding, both private and public, would be increased manifold over the next 10 years. This will imply greatly increased demand for professional/technical manpower in R & D work particularly in selected applied fields where Malaysia enjoys comparative advantages.

Although not as well highlighted by the IMP, the country will need to put greater emphasis in promoting small scale enterprises in the medium term to help overcome the likely growing unemployment problems. There will thus be increasing demand for small business management-related training, including training in entrepreneur skills. At the same time, the increasing corporatization of the traditional family enterprises will result in greater demand for formal training as a criterion for job recruitment and skills

assessment.

Finally, it should also be noted that, with the increasing trend towards the use of information technologies as a competitive tool in business, the tertiary demand for manpower skills related to information technology usage is expected to expand very rapidly over the next 5 to 10 years. A major part of this demand may, however, be translated into re-training of the existing workforce rather than net new employment.

In summary, while the short-term outlook for tertiary manpower demand appears gloomy, the outlook in the medium term remains bright. It must be re-emphasized here that, in view of the long gestation period involved in intertiary manpower training, the planning of tertiary manpower development must take a longer term pespective rather than just reacting to immediate market circumstances.

In fact, the current economic recession and slow down in tertiary manpower demand growth may turn out to be a blessing in desguise. A major factor that has limited the expansion of tertiary manpower demand in the past has been the relatively high salary cost of such manpower. Many small and medium scale industrial enterprises in the past could not afford the employment of engineering graduates due to their high salary in the market. The recent rise in graduate unemployment in reality does not reflect excess supply relative to the needs of the economy, but rather the mismatch between the salary level and occupational status expected by the graduates (based on historical norms) and these available under previaling market conditions. By adjusting downwards the unrealistic expection levels of the job-seekers to more reasonable levels, the current recession will help bring the labour market for tertiary manpower closer towards its long-term sustainable equilibrium level based on their productivity contribution. Any over-correction in this period will serve to increase the cost competitiveness of Malaysian economic producers, and encourage greater level of absorption and utilization into these sectors of the economy which previously could not afford to do so.

4. Implications for Tertiary Manpower Training Demand

How do the above findings translate into expectation about tertiary manpower training demand in the medium term future?

Basically, the somewhat optimistic outlook expressed above concerning tertiary manpower demand is further reinforced by examining the tertiary manpower supply trend in more details. Firstly, by comparative international standards, the proportion of Malaysia population with tertiary educational qualification remains low. As can be seen from Table 8, the overall percentage of the population in Peninsular Malaysia with tertiary qualification in 1980 was only 1.2%. Even among the younger age-groups (20-29), the proportion is still only 3.5%-3.8%. In contrast, 5.4% of Singapore's population aged 24-29 had tertiary qualification in 1980. The low attainment of tertiary education among the Malaysian population suggests that the scope for greater increase is potentially still high.

Secondly, the recent slowdown in manpower demand growth has affected the job prospects of upper secondary school leavers relatively even more than the graduates. This is so because the rate of expansion of the number of secondary school leavers is much higher than the rate of increase in white collar jobs in the economy. This problem is further exacerbated by unemployed graduates willing to take up lower-pay white-collar clerical work, thereby "bumping" out the secondary school leavers. As a result, a larger proportion of secondary school leavers is seeking tertiary education. This phenomenon is reflected in a very sharp drop in labor force participation rate among the 19-24 age-group in the 1980s.

Thirdly, untill very recently, the current as well as life-time earnings differential between holders of tertiary qualification and non-tertiary clerical workers remains very high in Malaysia. Indeed, practically every study on the subject in the past has noted the very high rate of return to tertiary education in Malaysia.[2] This has resulted in an expectation and perception structure which will persist for some time despite the increasing narrowing of the differential.

Finally, the recent slowdown in economic growth (and hence income growth), coupled with rising relative cost of tertiary education in many overseas countries, have contributed to an increase in the demand for <u>local</u> tertiary training. At the same time, the increasing restraint on public sector spending in recent years will

(i) reduce the number of government-financed students studying overseas; and

(ii) moderate the pace of expansion of student in-take at the government tertiary institutions.

Together, these factors are likely to contribute towards a growing potential demand for local private tertiary training.

5. Concluding Remarks

In conclusions, the following additional implications can be drawn from the above analysis:

- The biggest demand for tertiary manpower is likelyto be in the business-related fields in general and the manufacturing industry-related fields in particular. Applied technology and professional fields will be of increasing demand rather than pure science and the humaniteis.

- An increasingly large proportion of the training demand will be for skill upgrading and career advancement among the existing workforce rather than for new entrants into the job market.

- In view of the above, the method, content and technology of training may need to be flexibly adapted to the special needs of the target groups. For example, the IMP has recommended the use of video and telecommunication technology to support decentralized on-site training of industrial workers at their own firm.

- This flexibility, adaptability and market responsiveness is probably better attained by local private tertiary training institutions working in collaboration with advanced foreign training institutions. Representation by local industry or professional associations on the academic advisory board of these institutions is probably desirable to ensure that the content of the training provided continues to be relevant to the industries/professions concerned. The IMP, for example, has recommended the setting up of a private industry-funded tertiary training institute (the "National University of Technology") to provide distance training to the employees of the subscribing industries (using the video/telecommunication technology mentioned above).

<manpower.wpk>

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Footnotes

1. According to a 1973 Manpower Survey by EPU, the occupational pattern among university degree holders is as follow:

    21.3% in administration and managerial occupations
    74.6% in professional and technical occupations
     2.9% in sales and services occupations
     1.1% in agricultural and production occupations

    A survey of 1656 university graduates in employment in 1984 as reported by Fatimah Hamid Don et.al. (1984) found the following occupational breakdown:

    58.4% : executive
    38.9% professional
     2.8% sales

2. See e.g. Lee Kiong Hock (1980).

Table 1 Aggregate Manpower Supply and Demand Trend, Malaysia 1970-1990

	1970	1980	1985	5MP forecast 1990	1970-80	1980-85	1985-90
Population ('000)	10776.9	13879.2	15791.1	17877.2	2.6	2.5	2.5
WAG ('000)	5631.4	7845.6	9187.8	10601.8	3.3	3.2	2.9
LF ('000)	3681.9	5108.9	5917.1	6797.9	3.3	3.0	2.8
Employment ('000)	3395.9	4816.9	5468.2	6113.7	3.5	2.6	2.3
Unemployment ('000)	286.0	292.0	448.6	684.2	0.2	8.6	8.4
WAGR	52.3	56.5	58.2	59.3			
LFPR	65.4	65.1	64.4	64.1			
UER	7.8	5.7	7.6	10.1			

note : WAG = Working age group (15-64 year old)
LF = labour force

Source : 4MP & 5MP

Table 2 Real GDP growth rate of Malaysia economy, 1968-1987 forecasted growth rate, 1985-1990

period	% growth p.a.	
1961-65	5.0	
1966-70	5.4	
1971-75	7.1)	
1976-80	8.6)	7.8
1981-85	5.0	
1986-90 (5MP forecast)	5.0	
1986	-1.0	
1987 (forecast)	1.0	

Source : Economic Report (v.y)

Table 3 Changes in Sectoral Structure of Employment, Malaysia 1970-1990

Sector	1970	1980	1985	1990
Agriculture, forestry & fishing	50.5	39.7	35.7	32.7
Mining & quarrying	2.6	1.7	1.1	0.7
Manufacturing	11.4	15.7	15.1	15.4
Construction	4.0	5.6	6.9	7.8
Utilities, transport & communication	4.2	4.9	5.6	6.1
Wholesale/retail trades, hotel & restaurant	10.9	14.0	15.5	17.1
Finance & business services	0.9	1.6	1.9	2.8
Government services	11.7	13.7	15.0	14.0
Other services	3.0	3.1	3.2	3.4
ALL	100	100	100	100

Source : 4MP and 5MP

Table 4 Change in Occupational Structure, Malaysia 1970-1990

Occupational Group	Number ('000)				%				growth % p.a.		
	1970	1980	1985	1990	1970	1980	1985	1990	1970-80	1980-85	1985-90
Professional & Technical	157.7	288.1	356.7	485.6	4.6	6.0	6.5	6.6	6.0	4.4	2.6
Administration & Managerial	36.5	51.4	62	73.9	1.1	1.1	1.1	1.2	3.4	3.8	3.6
Clerical	167.7	358.9	415.8	471.6	4.9	7.3	7.6	7.7	7.4	3.5	2.6
Sales	283.9	471.1	578.9	682.4	8.4	9.8	10.4	11.2	5.1	3.9	3.6
Services	252.3	418.2	527	624.7	7.4	8.7	9.6	10.2	5.1	4.7	3.5
Agricultural	1641.6	1864.4	1907.4	1955.9	48.3	38.7	34.9	32.0	1.3	0.5	0.5
Production	856.2	1372.8	1628.7	1899.6	25.2	28.5	29.8	31.1	4.7	3.5	3.1
Total	3395.9	4816.9	5468.5	6113.7	100	100	100	100	3.5	2.6	2.3

Source : 4MP & 5MP

Table 5 Growth of Registered Professional Memberships, 1970-84

Registered Profess. Group	1970	1975	1980	1984	% p.a. 1970-80	% p.a. 1980-84
architects	277	465	533	658	6.5	5.4
accountants	592	1324	1619	3234	10.1	18.9
engineers	906	1537	8284	13881	22.1	13.8
dentists	650	1045	1132	957	5.5	-4.1
doctors & vet.	2151	2606	3867	4991	5.9	6.4
surveyors	n.a	n.a	417	662	n.a	12.2
lawyers	n.a	1027	1165	1698	n.a	9.9
Total	n.a	n.a	17017	26081	12.2	11.3

Sources : compiled from 4MP and 5MP

Table 6 Growth of selected higher occupations outside the professional/technical & administrative/managerial groups

Occupational Group	description	1970	1980	% p.a 1970-80
3.0	clerical supervisor	3956	8080	7.1
3.1	executive government officials	9625	28620	10.9
4.0	manager (wholesale/retail)	4048	7155	5.7
4.3	technical salesmen etc.	3405	9142	9.9
4.4	insurance, real estate & securities	3250	7154	7.9
5.0	manager (services)	n.a	2979	n.a
7.0	production supervisors	10098	25383	9.2

sourcer : compiled from 1970 and 1980 Population Census

Table 7 Growth of public sector staff by occupational group, 1981-85

Division	% growth p.a					
	1981	1982	1983	1984	1985	1981-85
A	15.2	10.8	8.2	5.6	3.6	8.7
B	14.7	7.7	4	2	4.8	6.6
C	11.6	7.6	4.2	2.3	0.9	5.3
D	14.8	5.9	4.3	3.3	1.2	5.9
All	13.7	6.9	4.5	3	1.5	5.9

Source : PSD

Table 8 Educational Attainment of West Malaysian Population by Age-Group 1980

TOTAL

AGE GROUP	NO SCHOOLING	PRIMARY	LOWER SECONDARY	MIDDLE SECONDARY	UPPER SECONDARY	VOCATIONAL	TERTIARY	TOTAL
5-9	538,279	913,137	0	0	0	0	0	1,451,416
10-14	38,949	776,243	541,076	1,038	0	10	0	1,357,316
15-19	52,728	256,613	477,036	392,148	44,666	12,621	10,273	1,246,085
20-24	69,511	37,812	248,132	251,092	51,922	6,020	39,757	1,038,246
25-29	80,535	381,726	199,327	154,788	21,951	2,910	30,268	873,508
30-34	101,014	395,882	108,327	95,709	10,962	1,254	22,608	733,756
35-39	121,139	305,669	55,377	51,758	5,117	634	13,847	553,541
40-44	169,986	276,385	34,968	33,529	2,892	394	8,761	526,915
45-49	167,599	185,942	16,642	15,800	1,290	189	4,083	391,545
50-54	170,781	135,744	11,146	8,669	751	95	2,298	349,484
55-59	152,245	97,889	7,945	7,215	538	99	1,521	267,452
60-64	146,790	68,015	5,199	4,961	375	75	945	226,340
65 +	307,619	89,988	6,310	5,345	372	60	1,186	410,880
ALL	3,575,384	4,275,045	1,711,488	1,024,052	140,836	24,361	135,547	10,886,713

AGE GROUP	NO SCHOOLING I	PRIMARY I	LOWER SECONDARY I	MIDDLE SECONDARY I	UPPER SECONDARY I	VOCATIONAL I	TERTIARY I	TOTAL I
5-9	37.1%	62.9%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
10-14	2.9%	57.2%	39.9%	0.1%	0.0%	.0%	0.0%	100.0%
15-19	4.2%	20.6%	38.3%	31.5%	3.6%	1.0%	0.8%	100.0%
20-24	6.7%	3.6%	23.9%	24.2%	5.0%	0.6%	3.8%	100.0%
25-29	9.2%	43.7%	22.8%	17.9%	2.5%	0.3%	3.5%	100.0%
30-34	13.7%	53.8%	14.7%	13.0%	1.5%	0.2%	3.1%	100.0%
35-39	21.9%	55.2%	10.0%	9.4%	0.9%	0.1%	2.5%	100.0%
40-44	32.3%	52.5%	6.6%	6.4%	0.5%	0.1%	1.7%	100.0%
45-49	42.8%	47.5%	4.3%	4.0%	0.3%	.0%	1.0%	100.0%
50-54	48.9%	44.6%	3.2%	2.5%	0.2%	.0%	0.7%	100.0%
55-59	56.9%	36.6%	3.0%	2.7%	0.2%	.0%	0.6%	100.0%
60-64	64.8%	30.0%	2.3%	2.2%	0.2%	.0%	0.4%	100.0%
65 +	74.9%	21.9%	1.5%	1.3%	0.1%	.0%	0.3%	100.0%
ALL	32.8%	39.3%	15.7%	9.4%	1.3%	0.2%	1.2%	100.0%

Source : compiled from 1980 Population Census

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MODELS

O.S.D.E.: OFFSHORE TEACHING AND ONSHORE LEARNING

I start with an assumption, and a presumption. My assumption is that Models, like theories, are to be used rather than believed in. My presumption is that this view is shared by our Seminar organisers who have provided a session on Models early in the Programme so that we may use it to look for common ground from the diversity of our separate institutional and contractual structures. We are I think being encouraged to go beyond the historical or descriptive case-study. If I had to defend this approach I would point to my experience at Distance Education conferences over the past 10-15 years. There I have heard "Jingo-ists" representing single-mode systems, dual mode systems, cohort and self-pacing systems, open or closed entry systems and united only in a common belief that their particular Model was self-evidently appropriate for universal adoption. And, in contrast, I have heard "Relativists" giving carefull, documented and detailed descriptions of their particular structures uniquely designed for specific applications in a specific context. In seeking to occup, the middle ground we should I think share not only the Forms of the various contractual structures we are now bringing into O.S.D.E., but also something of the processes, the choices between alternative courses of action and the constraints against which these definitive forms were determined. It may be a little pretentious to call this "modelling". The intention should rather be to search out frameworks for making comparisons which go beyond contrasts and distinguishing between those aspects of course provision and our services which lend themselves to collaborative activity and those which do not.

It seems likely that over the coming week, those of us who represent Offshore Providers of Distance Education will be looking for ways in which we can coordinate some of our activities with a view to making them more effective. Let's take an example. If we want to know how the Warnambool I.A.E. admissions policy for Malaysia-resident students compares with that of the Open Learning Institute we can get the information quite easily by comparing the relevant clauses in their respective Handbooks or their student information brochures. We will discover that the O.L.I. provides for Open Entry, subject to a satisfactory standard of English, whilst Warnambool requires 1 Principal Pass in STPM/HSC in an appropriate subject (Arts/Commerce/Maths) or 4 credits in SPM/MCE one of which must be English\ 119/332. That may be sufficient, we see a clear contrast in admissions policies and because the requirements relate to two distinct bodies of students taking separate awards from different Continents we may need no more. What however if we wish to explore possibilities for cross-crediting of units for Malaysia-resident students enrolled in these two autonomous and widely separated institutions? Then we can no longer address only the admission requirements themselves but must consider the institutional and perhaps even the political and cultural contexts from which they derive. What is the process through which open entry admission came to be established in British Columbia and what, if any constraints exist in the Victorian post-secondary education sector to prevent its recognition there?

In suggesting the usefulness of working models or framework for collaboration, I am arguing for little more than a commonsense approach to doing effective homework in advance. My experience in working for the establishment of

consortia in Australia is that often this is not done, or not done rigorously enough. We tend to concentrate on operational rather than background contextual factors when planning and negotiating. A good example of this may be seen in the infamous "NIH" (Not Invented Here) factor referred to by Mugridge (1983) in a paper describing the early stages of the development of the Open University Consortium of British Columbia. Mugridge saw this the N.I.H. factor essentially as a stratagem designed by participant institutions to guard against erosion of their autonomy even whilst they were active members of a collaborative consortium. One gathers that great progress has been made in Western Canada since that time but this concern with institutional myopia has been referred to also by a number of commentators on the Australian higher education scene (Jevons 1984, Moran 1986). Deploring the slow development of collaborative course writing and course unit exchange these writers argue, quite persuasively, that distance education should free an organisation from the conventional process of carrying out course preparation and production from its own resources. "Why re-invent the wheel when there are excellent ones available elsewhere?" (Moran 1986). This question, and the challenge it throws out, is valid enough when we look at off-campus teaching alone. Australia however has no single-mode distance teaching institutions. Addressing this N.I.H. question for dual-mode teaching institutions requires access to a framework which includes not only distance education operational issues but also those contextual factors which constrain the autonomy of either the external or the internal mode. Any imported wheel however excellent and however readily available, must fit the axles of both the internal and external bandwagons. The contextual constraint is the one which requires identity in the curriculum of attending and non-attending students. Attaching an imported wheel to the on-campus mode is most certainly possible, probably in some cases desirable, but it is often difficult to implement in the face of many academics established and continuing preference for "live" classroom lecturing from their own material.

Types of Offshore Education (O.S.E.)

There are probably almost as many varieties of Offshore educational strategies as there are institutions involved. We may however recognise 4 major types currently operating:

(1) Recruitment of full-time students for on-campus study overseas.

(2) Establishment of "Outreach" tuition centres for classroom teaching by itinerant staff.

(3) Freelance O.S.D.E.

(4) Mediated O.S.D.E. (Overseas University/CAE + Agency).

Disted Services has recently foreshadowed development of a 5th variant under the title:

(5) Supported Self-study (Overseas University/CAE + Agency (Disted) + Private College).

I assume that in this Seminar we will want to concentrate our attention particularly on (4) & (5). It is I suppose theorectically possible to

envisage the development of

(6) Contractual OSDE (D.E. Courses sold by Overseas CAE\University to Agency\College for local enrolment local teaching and local assessment.)

but national education policies both here and overseas make that highly unlikely. We should however recognise that the categories are not impermeable. The contract negotiated between Murdoch University and Disted precludes concurrent development of (3) and (4) in Malaysia. However, Murdoch's "dual-mode" structure specifically encourages Australia-resident students to select their mode of study course unit by course unit with the result that a high proportion of Murdoch graduates develop a "mixed-mode" academic profile. Permeability between (3) and (4) is therefore quite feasible as and when students circumstances change.

Mediated OSDE (Category 4)

What are the major characteristics of Mediated OSDE as developed by a number of overseas educational institutions in conjunction with Disted Services? I list these in a form which demonstrates familiarity with one such arrangement (Murdoch University-Disted) but which may be quite uncharacteristic of the other providing Universities & Colleges. We may therefore want to use some such checklist merely as a starting point from which we can set out to collect and use shared information.

MURDOCH UNIVERSITY

Mediated OSDE Checklist.

(1) OSDE students

- admitted under Same\Different entrance regulations as "Home\OSE On-campus
- enrolled as members of Faculty
  Programme
  Course
- given Same\Different course units content as "Home" D.E. students.
- given access to Full\Restricted range of course units
- Assignment assessment tutoring by Home based\ Malaysian based tutors
- Examination assessment by Home based\Malaysian based examiners
- Receive enrolment Counselling\Tuition at Study Centres

Contextual Frames and Distance Education

In their comparative studies of distance education systems in Sweden and Australia Dahllof (1977, 1986) and Willen (1981) have identified Contextual Frame factors as important influences and constraints on action. At the "micro" level Dahllof's early work on frame-factors influencing teachers' freedom of action was developed by Dodds et al (1984) to examine the physical, social and personal pressures under which distance students operate and to establish a framework for students own perceptions of the influences on their study performances. At the "macro" level Dahllof (1986) has developed a contextual rationale to indicate the way in which geographic and demographic constraints, and more particularly the restricted size and scattered location of student target groups, exerted influence in favour of the decentralised and small scale organisation of University distance education both in Sweden and Australia. In both countries the ongoing implementation of distance education courses by means of assignment tutoring, direct contact between academic course coordinators and isolated students and counselling supports have generally been seen as more important than large scale multi-media delivery of self-contained teaching materials. For present purposes Dahllof and Willen's question, "under what conditions..?" is useful in establishing the processes which led to Murdoch University's involvement in Mediated D.S.D.E. through Disted Services.

Murdoch University and D.S.D.E.

Murdoch is a dual-mode teaching University. It is also a metropolitan University located midway between Perth and Fremantle in a fast-developing suburban area. These two contextual factors have been important in the University's 12 year history and its geographical location contrasts markedly with those of two other Australian dual-mode Universities, New England and Deakin both of which are located outside the metropolitan cities from which they draw a substantial proportion of their external students.

At Murdoch, distance education has always been a significant element but never the dominant mode. Mixed mode study is very important; not only do mature-age student move regularly between the city and the country but may elect to study concurrently both on and off campus. Links between the two modes are therefore strong with shared teaching materials often used.

Over the past five years there have been three important developments in inter-institutional collaboration which have had significant effects on the way in which D.S.D.E. has come to be recognised at Murdoch.

(1) The first of these was the establishment of the "Toowoomba Accord" through which the 5 Australian University major providers of external studies have sought to facilitate students " cross enrolment" in each others courses.

(2) Within Western Australia three tertiary institutions, Murdoch, Curtin University of Technology & W.A. College of Advanced Education have established programmes with country based Technical and Further Education Colleges through which the first years of some B.A. and B.Sc. courses are offered locally. In this way it has been possible to

demonstrate that, with close control of the curriculum, careful selection and monitoring of local lecturers and tutors and the judicious use of distance education course materials, some course units can now be fully taught by staff other than those directly responsible for the University's own teaching.

(3) Third, and most influential from the point of view of O.S.D.E., was the 4 year staff development programme established and financed by the International Development Programme of Australian Universities and Colleges. Atkinson (1984) and Juler (1987) have written accounts of the project from the perspectives of the Australian participants, Murdoch & Deakin Universities respectively.

In 1983 arrangements were made for a small number of mathematicians and physicists from Universiti Sains Malaysia to spend 3-5 months working with Murdoch colleagues having similar disciplinary backgrounds, on the development of course materials. The objective was to develop practical skills in writing distance education materials for USM staff who were well qualified in their disciplines, and had off-campus course writing responsibilities but who did not intend to become distance education specialists. In this they were well matched with their Murdoch mathematics and physics colleagues and, certainly during the first 2 years when extended periods of time could be given to writing, some useful course design and development was achieved and interchange of ideas and experience effected. Juler (1987) records a rather different arrangement at Deakin when U.S.M. academic staff spent a large proportion of their time in workshops and training seminars. He records that "some would have preferred to devote the time wholly to writing while others saw more benefit in dispensing with writing altogether so that they could concentrate on seminars, real course teams meetings and observation of the Deakin system". (Juler 1987). Timmers (1994) reports success in a concurrent Canadian based scheme in which USM biologists and chemists were introduced to electronic manuscript preparation with consequent increased flexibility for modelling and designing courseware. At Murdoch the attention of visiting and resident staff came increasingly to concentate on distance learner characteristics and the importance of preparing course materials which are sensitive to these. Introducing the concepts of field dependence\independence as a stimulating model rather than as a construct with proven relevance, we used the work of Witken & Messick to urge greater sensitivity to the needs of "field-dependent" students entering mathematics and physical sciences courses where they may be relatively disadvantaged. Course writers, initially the USM writers but increasingly also the Murdoch academics were alerted to the fact that at least some of their students will expect their learning to be relatively highly structured, will prefer a personalised teaching style in print and audio and will benefit quite directly from supportive tutor feedback. Others will seek, through the same materials, for opportunities to apply their 'field independent' skills in analysis, spatial visualisation and restructuring. In all our planning and conduct of the IDP project, we stressed that we were linking Murdoch and USM needs in a common and interdependent approach to exploring the cognitive style characteristics of distance learners (Atkinson 1984). The subsequent development of O.S.D.E. at Murdoch has, of course, given these concerns added significance since the academic colleagues who previously worked directly with USM course writers are now actively involved in reviewing and restructuring their own courses for

D.S.D.E. use. Rewriting courses to meet the needs of new groups of students, however laudable, can be expensive and there has been until recently some danger of losing sight of the significance of these development costs in the new educational market place.

So, whilst some contextual factors stemming from its dual-mode and mix-mode teaching structure may constrain Murdoch University's capacity to meet the demands of D.S.D.E. other change factors have provided stimulus. The next test will be to see how Murdoch, separately, or preferably in co-operation with the other provider institutions, now responds to Digital Services proposal for the establishment of a private College-based classroom infrastructure to assist young full-time D.S.D.E. students. Our dual-mode teaching and local contractual arrangements provide some precedents and the value of sharing curriculum materials through Flexistudy is now widely recognised. Any such development will, however, need to take account of a firm belief that teaching, on or off campus, towards Murdoch awards should be done only by staff whose academic credentials have been approved.

Australian institutional and cultural attitudes towards "marketing" of education have been subjected to very significant challenge over the past 4 or 5 years. In particular, the Goldring Committee of Inquiry (1984) saw distance education as an important element in developing "a more imaginative approach to overseas student policy". The challenge to providers of D.S.D.E. is to be flexible and responsive to market demand without being opportunist. In developing its own approach to D.S.D.E. Murdoch University considered three possible strategic alternatives which approximated to the categories 2,3 and 4 introduced earlier in this paper. By selecting what I have termed Mediated D.S.D.E. Murdoch, along with other providers has put support for individual "onshore learners" at the centre of its offshore distance education planning. That should I think be reassuring to providers, consumers and mediators alike.

This Seminar's theme is "Breaking Geographic Barriers". That's really the easy bit for distance educators because it's our profession. We do it every day. Rather more taxing will be the two hidden agenda themes "Breaking Cultural Barriers" and, perhaps most difficult of all "Breaking Institutional Barriers". Mediated D.S.D.E. provides us with an excellent chance to do all three at once.

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THE NORTHERN ONTARIO DISTANCE EDUCATION ACCESS NETWORK:

A MODEL FOR COLLABORATION

A paper presented to the

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Breaking Geographic Barriers Seminar

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by

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THE NORTHERN ONTARIO DISTANCE EDUCATION ACCESS NETWORK:

A MODEL FOR COLLABORATION

The Project

On October 20, 1986, the government of the province of Ontario confirmed a promise made in its April speech from the throne by announcing the creation of the Northern Ontario Distance Education Access Network, a pilot project. Funding for the project totals twenty million dollars (Canadian), five million per year for four years. Unlike most other government ventures in the area of distance education, this project neither created a new institution nor funded hardware only. Instead the government chose to build on the existing base of ten post-secondary institutions and the Ministry of Education's Independent Learning Centre and to place 40% of the funding into a Northern Distance Education Fund for the development of courseware. The government also chose to base the network in two northern communities, Sudbury and Thunder Bay, instead of attempting to run it out of Toronto, the province's capital city, located in the south.

The underlying principle of the project is that many can accomplish more, in a quantitative and qualitative sense, than can any one individual institution. In other words, the project is founded on a collaborative model for government management, course development and delivery of programmes. This combination creates a collaborative model worth developing and studying.

This paper will present a description of the project and its context. Future papers will discuss and analyze the collaborative model and other elements of the project.

Ontario and the North

The province of Ontario, covering 450,000 square miles in central Canada, is the country's most heavily populated and industrialized province. Its capital city, Toronto, with a population of two million is Canada's largest city, the financial heart of the country. Northern Ontario represents just over 90% of the province's area but with approximately 650,000 people, has only 10% of its population. The regional municipality of Sudbury, with a population of 154,387, is located 250 miles north of Toronto and 300 south of Moosonee on the southern extension of Hudsons Bay. Thunder Bay, 600 miles west of Sudbury on the northern shore of Lake Superior, is a community of 112,000 people.

Most Northern Ontario communities are small single-industry towns, founded on a resource-based economy of either mining or forestry. Over 60% of northern communities have less than 2,500 inhabitants and 75% of the population resides in five major regional centres. (Rosehart, 1986). Recent development of

production facilities in Third World nations and increasing mechanization have resulted in serious labour force displacements. For example, in Sudbury the international nickel giant, INCO, dropped its mining labour force from 18,000 men in 1964 to 8,000 men in 1984. Projections call for additional downsizing to less than 5,000 by 1990. Both federal and provincial governments have moved various service ministries into the North but structural unemployment has remained higher than elsewhere in the province.

There are two northern universities, Laurentian in Sudbury, with affiliated colleges in Hearst (400 miles northwest), North Bay (80 miles east) and Sault Ste. Marie (120 miles west) and Lakehead, in Thunder Bay (600 miles west). There are also five northern community colleges, Cambrian in Sudbury, Confederation in Thunder Bay, Canadore in North Bay, Northern in Timmins and Sault College in Sault Ste. Marie. (Figure 1) The population of the North is 30% francophones, where participation rates in post-secondary education are less than half those of the anglophone majority. A large native population is scattered over approximately 40 reservations.

Education in Ontario

Post-secondary education in Ontario is divided between two very different systems, that of 16 autonomous universities (including one polytechnical institute) and 22 centrally governed colleges of applied arts and technology.

Of the 16 universities, 11 offer programmes via distance education, utilizing all existing technologies. The largest programme, that of the University of Waterloo, offers nearly 300 courses by audio cassette, allowing students to complete full degrees at a distance. Laurentian University of Sudbury, one of the contractors for the Northern Project, runs the province's second largest programme, Canada's largest bilingual (French/English) programme with over 80 courses offered by print correspondence, audio and video cassette, broadcast television, audio teleconference and by computer. Other universities offer programmes ranging from a few individual courses to a maximum of 30 courses, some offered exclusively by teleconference, or television or print, depending on the university.

Each institution is autonomous and in the area of distance education little collaborative work has been done. In 1983, the Council of Ontario Universities commissioned a study to determine the extent and potential of distance education in the province, which recommended a distance education committee for co-operative and collaborative development (Smith and Snowden, 1983). The committee, with representatives from all provincial universities,

has had some success in the area of co-operative promotion of programmes but none in the area of collaborative development. Ontario's community college system was created 25 years ago to provide skills training as an alternative to university-level study. Each college operates in a carefully delineated territory, offering programmes approved by a provincial council of regents. Some distance education activity was undertaken by Seneca College in Toronto, strictly for television delivery and Confederation College in Thunder Bay (contractor for the Northern Project) pioneered a programme to meet the needs of isolated Northern communities. In 1985 the colleges released their first report on the status of distance education in the system, stating that 14 of the 22 colleges were then engaged in some form of distance education.

The vast size of the province and the large areas with small, scattered populations required that the Ministry of Education provide secondary school credits via distance education. The Independent Learning Centre, created by the province in 1926, offers over 160 courses in English and 65 in French, almost exclusively by print-based correspondence. Each year, over 80,000 students register in the programme.

Governance of the Project

Given the vast size of Northern Ontario, its small scattered population, its economic difficulties and its educational providers, the provincial government saw a unique opportunity to explore distance education as a mechanism for regional development. The Northern Ontario Distance Education Access Network provides the framework. This distance learning initiative is unusual in the number of government ministries involved. The provincial management committee, which is responsible for overall policy direction for the project includes a representative from the Ministry of Colleges and Universities, (the lead ministry for the project) Education, Northern Development and Mines, Citizenship and Culture, Government Services, Skills Development and Transportation and Communications. The Ontario Educational Communications Authority (TVOntario) is also represented. This combination of government ministries and agencies is indicative of the amount of interest the project has created.

The government has contracted in both Sudbury and Thunder Bay with the local university and community college to manage a Regional Co-ordinating Centre and the network. Each institution has named an official representative who also sits on the provincial management committee. Each regional co-ordinating centre has hired a director who will have a non-voting position on the committee.

Using the Northeast as a model, the Regional Co-ordinating Centre will function as the core of the project. Its staff will include an instructional designer to aid in the development of material and the training of staff, a network manager who will be responsible for the maintenance of the access network, development officers for secondary school projects and francophone programming, and a research officer who will be based in Sudbury but will be responsible for overall co-ordination of all research activities associated with the project.

To ensure the broadest possible base for the project, each set of contractors will be advised by a regional advisory committee. In the Northeast, the committee chairman and vice-chairman will be the contractors' representatives. In addition there will be six other educational representatives: one each from the other three colleges, one from amongst the three Laurentian affiliates and one from the Ministries of Education and Colleges and Universities. The Ministry of Northern Development and Mines will name eight citizens from Northeastern Ontario to the advisory board, to represent various populations and constituencies.

The network itself in its first phase of development in September 1987 will be distributed among 24 selected Northern communities and will include IBM computers, with modems and printers, some ICON computers (a provincial government-sponsored machine used in secondary and elementary schools), video playback equipment, teleconferencing equipment and facsimile machines. Other equipment may be added as programmes are developed and up to 40 different communities may become part of the project.

Northern Distance Education Fund

One of the more unusual aspects of this project is that 40% of the government funding commitment is for the development of new post-secondary distance education programmes which meet the needs of the people of the North. The fund is maintained by the Ministry of Colleges and Universities. Again, the collaborative model holds, as one of the criteria for successful application to the fund is collaborative development. Since there is no strong co-operative tradition in Ontario, collaboration may prove especially difficult in this area.

Grants from the fund are awarded by a selection committee chaired by the project representative from the Ministry of Colleges and Universities. Other members of the committee are a representative from the Ministry of Education and representatives from the distance education committees of the Council of the Ontario Universities and the colleges of applied arts and technologies. In addition, each regional advisory board nominates four regional distance education experts to the government of whom two are

chosen by the Ministry of Colleges and Universities. There are two application deadlines yearly and a revised set of criteria and application forms are now being completed.

The Northern Distance Education Fund represents a total of six million dollars, of which 1.24 has already been distributed or committed. The funds will pay development costs for feasibility studies, for full programme development or for acquisition of existing courseware. In the first round of applications, the largest grant went to Laurentian University for a Post RN Bachelor of Science Degree in Nursing, developed in collaboration with Lakehead University in Thunder Bay. Three and one half years of funding, for a total of $705,000 (Canadian) will allow the development of 13 half courses in nursing and seven in biology and chemistry, utilizing print-based correspondence, teleconference, video and audio cassettes and on-site labs.

Obvious difficulties of distance and cost make collaboration a challenge. Lakehead and Laurentian are over 600 miles apart, so course teams meet by teleconference. However, each team attempts to meet at least once in person, at an estimated cost of $1000 (Canadian). Materials must be sent between institutions, creating delays of up to one week. As well, slight variations in curriculum will occasion additional costs for adaptation once Lakehead actually begins to run the programme in September 1987 (Laurentian launched its first courses in January 1987). A total of three courses have been developed, two in nursing, one in biology.

Since the programme was originally announced, a number of other provincial nursing schools have expressed interest and at least two will probably participate in course development as the project continues. All courses will be completed by March 1990, although the 1987 class will probably not graduate until 1992.

In the community college sector, Cambrian College received $169,000 for the creation of a bilingual programme for development services workers. This project will aid human services workers dealing with clients who are unable to care for themselves emotionally and economically.

Lakehead University, which before the project had done no work in distance education, was also given $78,000 to acquire a foundation programme in arts and science. Even though this would duplicate existing programmes, the selection committee felt the university needed to gain the experience of running such a programme as quickly as possible.

The remainder of first-round funding went to feasibility studies or the development of proposals, including projects in forestry, gerontology, environmental studies, public administration,

upgrading for teachers, and an M.B.A. programme, which is being developed by Laurentian University in collaboration with Deakin University in Australia.

Research and Evaluation

Among the stated objectives of the project are research and evaluation of the effectiveness of various information technologies. In the Northeast, the contractors insisted this be broadened to include research on all aspects of the distance teaching endeavour. Eventually, this component was added to each letter of agreement between the government and the four contractors and further enhanced by the creation of the position of research officer for the project. Under the conditions of the contract the officer, who works out of the Sudbury centre, is responsible for all research carried on for the duration of the project, for the development of an international distance education research symposium in 1988, for faculty development and for on-going evaluation of the project itself.

Since the project is relatively complex, will run for four years and covers such a large geographic area, it was felt to be necessary to develop some framework for the research activities. The most valuable seemed to be a slight modification of Holmberg's definition of the several elements of distance education as a field of study (1986). This idea was expanded by the author at the 1987 Lifelong Learning Research Conference in College Park, Maryland, although additional work remains to be done. According to this adapted taxonomy, research areas will include students, their milieu, conditions and study motivation; subject matter presentation; communication and interaction between students and their supporting organization (tutors, counsellors, administrators, other students); administration and organization; economic systems (comparative distance education, typologies, evaluation); and history (Croft, 1987).

Conclusion

The Northern Ontario Distance Education Access Network and the Northern Distance Education Fund provide a unique opportunity for study over the next three years. The collaborative model is often seen as the most cost-efficient for course creation and the most useful for multiple utilization of courseware. This project will provide an opportunity to examine these assumptions.

FIGURE I

Scale
1 inch = 125 miles

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Deakin University

STUDENT SUPPORT SERVICES - WHAT DO OVERSEAS STUDENTS NEED?

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STUDENT SUPPORT SERVICES - WHAT DO OVERSEAS STUDENTS NEED?

Any tertiary institution operates with its own environmental climate and style and according to its knowledge of its own students. The support services for its students incorporate both explicit and implicit assumptions about student motivations and needs and about the institution's responsibility to meet them. In offering places to overseas students to study at a distance, it is thus necessary to identify clearly these assumptions and see whether they apply equally in another country, another educational and cultural climate, and with other administrative and academic processes involved.

This paper seeks to do this by taking Deakin University as an example, clarifying Deakin University's assumptions and modus operandi, and then asking questions about the differences we will encounter in teaching our programs overseas. The aim is to determine the changes in our perceptions and approaches which are necessary if our overseas students are to meet their learning goals effectively and enjoyably.

ASSUMPTIONS

The key principles underlying Deakin University's support services are:

- A commitment to widening access to tertiary educational opportunities. In the BA degree, for example, this has included entry of a significant number of adult students with no prior qualifications.

- An equal commitment to helping students maximise their chances of academic success, beginning with ensuring their motivations and goals are clear before they begin study. The admission process thereby can be almost as much self selection as the University's decision, particularly in the BA program. This does not preclude competitive selection by the University, especially for post-graduate programs.

- An assumption that face to face contact is less important in the learning process than personal contact. While some face to face contacts occur - e.g. in visits to students, weekend schools, and some tutorials in study centres - for the most part contact is through letters, telephone, and in one program, computer. Compulsory attendance requirements are rare.

- A belief that students are responsible for their own learning. The learning materials are devised as self-instructional packages, with in-built assumptions of the independence of the learner, combined with recognition that students generally need to spend considerable time re-learning how to learn, and need reassurance and support during that time. The role of Deakin's support services is to facilitate students' choices of courses of study and provide practical assistance and various kinds of reassurance and encouragement in conjunction with academic staff in each course.

- The support service staff at Deakin are the continuing "face" of the University to most off campus students. Their academic tutors change as they take different courses, but the student advisers follow them right through their study. The student adviser has to overcome the communication difficulties of physical separation of the student and University by adopting a particular style of openness, friendliness and helpfulness.

- Effective and efficient administrative systems are essential for smooth running of the relationship between University and student, but the system must fit the student, not vice versa. Bureaucracy tends to breed rigidity which ill-fits the nature of learning and the highly varied needs of learners.

DEAKIN UNIVERSITY STUDENT SUPPORT SERVICES

While support services are available to off campus students throughout their study, Deakin University has found the first 12 months to be critical. Student withdrawals after the first year drop markedly (by c33%) once they have conquered study techniques for their program and settled their study into their routines of living.

The first step is inclusion in the publicity material of a section giving readers a framework for identifying their learning goals. This is used particularly by undergraduate students who normally accompany their application with a personal statement outlining why they wish to return to study. This information often alerts the admissions group to incipient problems for that student - e.g. with language, perceptions of tertiary study, clarifying of goals, personal problems - which may be tackled early to preempt failure.

Orientation for new students takes three forms. A Counselling Package is sent on confirmation of enrolment. It focusses on the joys and trials of studying, development of self-discipline and changes to life style required of the learner, resources and support services available through Deakin, and study techniques and skills the person will need to develop. Orientation workshops are held prior to commencement of the academic year; they cover similar topics and also give students an opportunity to talk face to face to academic staff about course content, and degree planning. Then, about 4-6 weeks into first semester, student advisers visit study centres and contact other students by mail and phone, to coincide with preparation of first assignments. From experience this is a critical period for new students, when practical assistance with study techniques, reassurance and encouragement can make all the difference to their continuation and successful learning. This applies particularly to undergraduate students, but also holds true for postgraduate students who have to learn again how to learn, often in a relatively new subject area.

Support services thereafter include all the usual administrative tasks of despatch of materials, arranging workshops, tutorials etc., receipt and despatch of assignments, facilitation of self-help groups, variations to enrolments, reenrolments, etc. Accompanying each task is constant personal contact with students - individually through letters, telephone calls and visits, and collectively through the mail and various meetings. As the first, and constant point of contact, the student advisor's role includes

many aspects undertaken by academic staff in conventional Australian tertiary education. Part of the adviser's skill is knowing when to pass an enquiry or problem on to academic staff, study skills advisor, or personal counsellor for specific or specialist response.

THE STAFF

The student adviser - the manager of the support service system - must combine administrative competence with well developed inter-personal skills. She/he needs to be a good listener, to use the telephone well and to write clearly and in a friendly personable fashion. The voice and the letter must inspire confidence in the student that the problem or issue will be taken up, speedily, on the student's behalf. This applies not only to senior support service staff but to the entire group, since it is generally the more junior staff who pick the phones up and who deal with the more routine queries and problems. As managers, the student advisers must also have a good grasp of the increasingly complex, computerised and other administrative systems, which underpin student enrolment and support services.

Tutors in Deakin University's distance education program are separate from the student support service network. Nevertheless, they need similar inter-personal skills to those of the student advisers, in addition to their academic qualifications. Some are full-time academic staff of the University; many are part-time, marking assignments and examinations and contacting students by mail, telephone, teletutorial, or computer. They must know the learning materials extremely well even though they did not design the course. Most come from a conventional on campus academic background and have to acquire different skills - for example, in marking, where the detail and tone in comments on an assignment replace a face to face tutorial and are a critical part of the teaching/learning process.

TEACHING OVERSEAS

How, then, does such a process and system translate to teaching overseas, specifically Malaysia? In posing the questions below, we are assuming an "extended campus" type of operation rather than a strictly distance education approach, with a Malaysian agent providing student support services and students attending classes taught by locally engaged tutors.

1. What are Malaysian students' goals in studying, and to what extent is self-selection possible?

2. Can we assume these motivations are strong enough to persist in the face of communication, language and other difficulties in studying? What are the implications for the kind of support to be provided from Australia and locally?

3. What style of approach is required to alert students to the difficulties of studying and to providing the skills and encouragement they will need?

4. How do we overcome problems of English language ability, jargon of certain disciplines, and the cultural specificities in Australian-based course material?

5. What strategies are needed to retain the identity of Deakin University (philosophy, style, standards, pedagogy and subject matter) while ensuring the program of study is relevant to the Malaysian student's needs and context?

6. Is the role of the local student advisor to be similar to that of the Geelong-based advisor?

7. What training is required for student advisors in catering for distance students' needs and in working within the Deakin support and administrative processes and mechanisms?

8. What are to be the roles of the tutor and the student advisor/agent? Are they similar to those operating in the Australian context?

9. Can all students have access to regular classes conducted by a tutor? If not, what kinds of support will more isolated people require?

10. What training do local tutors require in distance education and in the pedagogies within Deakin's distance education material, particularly where they have no prior experience in distance education?

11. What is the role that Deakin support service staff can best play at one remove?

12. What training do Deakin support services staff require in educational and cultural differences in studying at a distance in Malaysian society and in Malaysian students' expectations?

CONCLUSION

This paper offers questions, not answers, in order to open up the debate on issues which must be teased out if off shore distance education is to be truly effective. The clarity and mutuality of understanding of different cultural and educational contexts is critical to any agreement between a home institution and an "educational broker". Details of services and administrative systems follow a basic agreement on student needs and the nature and style of support services.

THE NEEDS OF OUR OFFSHORE STUDENTS

Stuart Hosking

Warrnambool Institute of Advanced Education

Offshore education has arrived, but what do we mean by offshore education? For my institution, Warrnambool Institute of Advanced Education, it means the extension to residents of another country of the provisions we currently make for Australian students to undertake, and hopefully complete, undergraduate and postgraduate courses by external study. These provisions include study materials, primarily print-based, and support services - academic, administrative and personal. However, the offshore students with whom we are hoping to communicate effectively, and for whom we are endeavouring to provide appropriate support services, almost certainly will not have their needs best met by the provisions made for onshore students. What are the real needs of our offshore students? This one question heralds many more; more than I will pose here.

I don't have any answers to these many questions. All I have are hypotheses as to what might be these answers. The purpose of this paper is to pose some of these

questions and, in some cases, my hypotheses, to provoke discussion which will hopefully enable us all to approach a more realistic understanding of the students' needs and how best they may be met.

1. With whom are we communicating, ie who are our students?

We do have some knowledge, and hopefully, some understanding, of the background of our onshore students which influences the design of the study materials we provide. While we will not be making major modifications to these materials for our offshore students, we must quickly come to understand as much as we can of the background of our offshore students if we are to be able to maximise the benefits of the educational opportunities we are providing for them.

(a) What do the students bring with them at the outset? We will have a transcript of their previous educational attainment but what does this transcript tell us? Can we be sure that we are not making false assumptions in this area which will disadvantage the students in their pursuit of meaningful academic success?

(b) Are there language difficulties, and related

problems, experienced by our offshore students which must be remedied if effective communication is to be maximised? Written, and oral, communication does have a distinct cultural bias and unless we are fully aware of the inherent implications, we are unlikely to best meet the needs of offshore students.

(c) Are there other cultural differences which, in addition to those manifested in language difficulties, must be taken into account when considering the needs of offshore students?

These are just some of the issues which require immediate resolution if we are to commence our offshore operations effectively. For us, who are still grappling with these issues but have already enrolled offshore students, I only hope that the short-term decisions we have made prove to be appropriate and productive in the long-term.

2. What resources need to be made available for our offshore students?

(a) In addition to the packages of study materials we will provide and the prescribed texts which the students will purchase, we assume that, for many

subjects, our onshore students will undertake wider reading from resources available locally, via newspapers, periodicals and books available either by purchase or on loan from local libraries. Access for our offshore students to similar appropriate resources cannot be assumed - in fact access is highly unlikely. Given that this need for access to wider reading materials exists, how is this access to be provided, both effectively and economically?

(b) What academic support will be provided for our offshore students?

Our onshore students are provided with academic support in a variety of ways - on-campus sessions, visits by academic staff to regional centres, phone and mail contact, etc.

The barrier of distance necessitates an entirely different approach to providing necessary, and appropriate, academic support. The frequency of visits by academic staff to meet with offshore students is necessarily constrained by cost (time and money) factors; attendance by students at on-campus sessions is not a realistic possibility; phone contact is possible but neither convenient

nor cheap; mail contact is possible but response time is far from satisfactory; facsimile machines do overcome some of these problems but do little to personalise the communication with the student. One option is to recruit Malaysian tutors to provide the bulk of the necessary academic support, but there are dangers inherent in such a system which must be averted. The tutors must not only, at an academic level, understand the subject's objectives and be fully conversant with its content, but must also be aware of, and convey to the students, the emphases applied by the academic staff who have prepared the materials and are ultimately responsible for the assessment of the students.

If we accept that utilising the services of Malaysian tutors is the path to follow, how can we ensure that these tutors are going to provide the support necessary for our offshore students to best meet the requirements predetermined by the host institution which, while in some cases not clearly delineated, nevertheless impact on assessment of assignments and examinations?

For the tutors, what level of contact with academic staff from the host institution is

required, and how can this best be provided?

(c) What counselling support may offshore students need and how best can this be provided?

I do not profess to have any knowledge of the likely needs or the most appropriate means of meeting needs in this area. However, it is an issue requiring attention, and I hope I will learn much in this area during this workshop.

(d) Will offshore students desire a sense of institutional belonging and if so, how can this be fostered? Will, say, twice-yearly visits by staff from the host institution be enough? Should a convocation of offshore students of a particular institution (or maybe even of a number of institutions involved in offshore education) be established? Will the availability of the host institution's screen-printed tee-shirts, track suits, etc assist in meeting this need?

CONCLUSION

Where do we start and where do we end? We know where we would like to end, we have some idea of where we would like (or expect) to start, but we have only a limited understanding of how to bridge the gap. As representatives of tertiary educational institutions either already involved, or considering the prospects of, offshore education, we have a responsibility to give serious consideration to the issues I have raised, which are but a sample of those which require resolution if the investment which Malaysian people are making (or will make) in furthering their education is to prove rewarding for all concerned. I have no answers, only hypotheses, but I hope that the situation will be reversed by the time this workshop ends.

SUPPORT SERVICES FOR DISTANCE EDUCATION STUDENTS

Jack Foks
Head,
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SUPPORT SERVICES FOR DISTANCE EDUCATION STUDENTS

1. SOME INTRODUCTORY REMARKS

There are two questions to ask regarding support services for distance education students:

- what services are to be provided?
- how are the services to be provided?

It is possible to divide the services which might be provided to students into two categories - essential and desirable. Of course it would also be possible to divide desirable services further into highly desirable, fairly desirable, a little bit desirable and so on ad infinitum, but I shall resist the urge to split hairs, knowing that one of my readers will probabbly take the opportunity to do so as the basis for a PhD thesis or some other learned paper. Suffice to say that a distance education system will not function at all if certain student services are not available, and that there are other services whose absence will only provide varying degrees of difficulty to students.

The means by which services are provided to distance education students relate to the processes used and the extent to which the provision of the services is decentralised.

2. DISTANCE EDUCATION - A WORKING DEFINITION

Sections 3 and 4 which follow, will examine the questions of essentiality and the means of providing student services. Before this can be done, however, it will be necessary to establish a working definition of "distance education", as both essential and desirable services will reflect the features one attributes to the distance education mode.

Distance education is a mode of learning with certain characteristics which distinguish it from other modes of learning. Educational experts spend a good deal of time considering what these might be, but, when it is all said and done, the characteristics which emerge as being fundemental are two in number:

- the design, production and delivery of self-instructional study materials;
- regular one to one interaction between student and tutor operating at a distance from one another.

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3. TYPES OF STUDENT SERVICES

3.1 General

In order to present a challenge to the readers of this paper, the list of student services will not be exhaustive and they are invited to add others which occur to them. Those that are identified will be arranged under a number of headings, showing both essential and desirable ones.

3.2 Pre-Enrolment Counselling

The only pre-enrolment counselling which is essential is the provision of information on the distance education offerings which are available and the courses of which they are part; without this basic one way flow of information (usually provided through course pamphlets or prospectuses) it just would not be possible to arrange enrolments. Some distance education systems are content to limit their pre-enrolment counselling to this, leaving it up to the students to use the information as best they can.

But it is possible to go further. As well as providing information on the available offerings, organisations can decide to provide advice as well, in other words, to help the students to interpret the course information which has been provided. At this level of counselling it is likely, though not necessary, that counsellors will start to be involved in some sort of interaction with potential students.

3.3 Enrolment

It would presumably be difficult to run a distance education organisation without enroling students, so this process is included as one of the essential forms of student support.

A service which organisations may wish to add to this is referral, either from another organisation to one's own or from one's own to another.

3.4 Learning Support

Given the distance education characteristics identified in section 2 above, the provision of study materials to students is basic to any distance education system. The usual form that these take is still the printed word. However, it is now possible to consider alternative media and much has been said and written about the tremendous potential of audio-visuals and high technology to provide exciting and meaningful alternatives and/or supplements to print.

The second feature of distance education is regular interaction between student and tutor operating at a distance from one another. This can, of course, also take various forms, but the most usual one continues to be the submission of written assignments by students and the marking of these, also in writing, by formally designated tutors. At its most basic, the marking consists of a numeric or alpha mark and nothing more.

The preceding two paragraphs describe the bare essentials of the learning support which must be provided to distance education students. To these can be added several services which, whilst not essential, are nonetheless desirable.

To begin with, the marking of assignments can go well beyond a simple number or letter. Comments which identify the nature of mistakes made, ways of avoiding the same mistakes in the future, questions which students have handled well, and additional activities or research that students could perform, could all be provided. It is also possible to use a variety of strategies to provide such feedback in addition to, or instead of, the written word - for example, sending students tape recordings, telephoning students, or even visiting students in person (although this does run the risk of their discovering that tutors are human beings just like themselves).

Then there is the provision of practical classes, seminars and workshops. In some instances these may in fact be compulsory components of courses. Whether this is the case, or whether they are offered as options, arrangements must be made to provide them. The traditional method has been to demand that students attend classes on campus at set times, say at a summer school or over a weekend. Alternative strategies are being increasingly used, however. Seminars can be conducted by teleconference, arrangements can be made for practical work to be conducted on the job.

Provision can be made for students to make personal contact with tutors by providing names, addresses, telephone numbers and times available. Informal tutorials can be arranged to provide more interaction with tutors and with other students - indeed, tutors can be left out of it altogether by encouraging and facilitating students' study groups and networks.

In addition to the formal study materials, it is often necessary or desirable for students to have access to a range of other learning resources, such as texts, references, audio-visual materials, computers and various items of equipment. Institutions may decide to provide students with access to some or all of these.

Finally there is the question of support in the form of learning management. Learning management is a term used to describe a process of ongoing educational support and counselling during a

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student's course of study. For example, if a student is experiencing particular difficulties, if a student is not being sufficiently challenged, if it turns out that a particular course of study is not, after all, appropriate, then the student would be able to discuss this situation with a member of staff responsible for that student's pastoral care (a term often used to describe those guardian angels is "mentors") and consider alternatives for dealing with it. At its most passive, learning management is provided in response to students' requests, but it can also be pro-active with mentors on the alert for, and taking action in response to, danger signals such as tardy returns of assignments, poor marks, changes in students' personal situations, and unsatisfatory performances by tutors.

3.5 Administrative Services

In order to be operational, a distance education organisation must have the following adminstrative services in place:

- processes for employing tutors;
- stock control systems;
- student record systems;
- assignment traffic record systems;
- processes associated with certification.

These are really mechanisms for supporting the services described in earlier sections. The employment of tutors ensures that assignments are marked and assignment traffic records are one of the information sources for effective learning management.

4. METHODS OF PROVIDING STUDENT SUPPORT SERVICES

4.1 General

As indicated earlier, different distance education institutions will decide to provide various levels of support to their students over and above those which it is essential that they provide. The nature and the extent of the services they choose to make available will reflect the philosophy, resources and politics of the institution. Whatever is decided in principle, it will be necessary to deal with certain questions of implementation.

4.2 Shall We Use The Dreaded Machines?

All of the services which have been described can be provided by

human effort. But many of them can be provided by computers as a supplement to, or instead of, people. This is fairly obvious in the case of student records. It may not be so apparent in the case of counselling, but even here sophisticated programs have been developed.

The main reasons given for using computers are increased efficiency and increased cost effectiveness. Whilst this is undoubtedly true in many cases, it is a premise which cannot automatically be assumed on every occasion.

Establishing computer systems involves substantial investment of funds, of staff development time and of administrator's time spent in developing associated procedures. There is also often a critical level of activity and/or volume of work below which manual systems are more efficient and cost effective than computerised systems.

And even those computer systems which are demonstrably efficient and cost effective in theory, may not be so in practice if staff and student attitudes undermine effective implementation. It is usual to associate only negative attitudes, based on superstition, fear, and inate conservatism, with such counter-productivity. However, effective use of computers can also be seriously undermined by the unthinking enthusiasts who believe blindly that the computer can do everything and that its answers to all questions are the result of divine omniscience.

So, the decision to use computers to supplement or provide student services should be based on a thoughtful analysis of the tasks to be performed, and a considered weighing up of the initial and ongoing investment against the projected output.

4.3 By What Mode Shall We Deliver The Service?

The interaction associated with support services to distance education students can take several forms. It can be face to face or conducted at a distance; it can be one way or two way; and it can be immediate or delayed.

For example, when a student drops into his/her mentor's office for a chat, they are engaged in two way, face to face immediate interaction. When a student writes to a library requesting a book and the library sends that book by return mail, two way, delayed interaction at a distance has taken place. One way, immediate interaction at a distance would occur when a tutor makes a live radio broadcast to point out to students difficulties associated with unit five of Underwater Knitting.

Which methods, or combination of methods, are used will once again depend upon the policies, processes and resources of different institutions.

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Should Services Be Provided Centrally Or Locally?

Many distance education organisations have established networks of local or regional student support services. Two highly formalised examples are the UK's Open University and the Victorian TAFE Off-Campus Network (VTOCN), both of which enrol and provide a high level of support to their distance education students through a network of local/regional study centres. In the case of the Open University the study centres are in effect self-contained branches of the University. The VTOCN, on the other hand, makes use of a network of local TAFE (technical and further education) colleges which, in addition to providing special support through their "off-campus centres", make all their resources and services available to their distance education students.

There is certainly a case to be made for providing services as close to students' places of residence or employment as possible. Wonderful services may be available on the main campus of a distance education institution, but these may be of little or no use to many students for the very same reasons that led them to choose the distance education mode in the first place.

Local support is more accessible and, because of local knowledge, often more relevant than the support available at a remote and anonymous central institution. As a consequence, students are often more inclined to seek support and make use of resources. In educational terms, the potential for immediate interaction with tutors and immediate access to learning resources is effective and motivating.

Further in support of the case for decentralisation, it is also possible to caricature a centralised model of student support services. The cold, unfeeling, over-bureaucratised organisation, which generates more obstacles than support for its remote students, is a picture painted by many.

And yet there are many arguments put up against decentralisation.

The first and most important one of these is that academic standards can easily be undermined by, for example, the use of local tutors or locally held seminars. How is it possible to ensure that standards are maintained when local staff are not part of, and have only limited interaction with, the faculty on the main campus? How would local mentors manage students' learning without an ongoing appreciation of the institution's academic principles?

Secondly there is the question of resources. The establishment and running of effective local student support services can cost a lot unless it is possible to:

- redirect existing resources away from central to local use, a move which might cause some concern amongst those from whom the resources are taken;

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- use existing local resources which are supplied free of charge or at minimum cost. In times of economic restraint local organisations may not be inclined to generosity.

In the third place, modern technology can overcome the barriers of distance. If appropriate equipment and communication systems are available, students can interact with mentors, tutors, learning programs and administrators via teleconferences, one way and two way radio and television broadcasts, videotex systems and computer networks.

And lastly, there is the issue of politics. Elsewhere I have written that educational trends are all related to empires. And there is no doubt that the debate on centralised versus decentralised support systems occasionally turns on questions of power rather than those of educational principle. Who should own the local staff? Who should own the local facilities? Who should own the local students? Could a local entrepreneur subvert the influence of the central organisation?

5. SUMMING UP

There are several support services which it is essential that distance education institutions provide to their students. They include the provision of course information, study materials and marking of assignments, supported by appropriate administrative systems and processes. When these are all that is provided students are left very much to their own devices as far as their learning and access to associated resources are concerned.

If it is consistent with an institution's policy and the resources are available, it is possible to provide additional services which will enhance the students' learning experiences. Meaningful and pro-active learning management, access to learning resources, greater interaction between student and tutor are some of these.

There are very considerable advantages in providing as many of these services locally as possible. But when deciding on the extent of decentralisation, it will be necessary to take account of the effect on academic standards, the availability of resources, the possibility of using new technologies to overcome problems of distance, and the political climate within and outside the institution.

SUPERVISION OF TEACHING AND ASSESSMENT

IN AN

OPEN LEARNING CONSORTIUM

1. Introduction: The Offshore Strategy.
2. An Open Learning Course.
3. Transferring Standards.
4. Two Versions of Standards.
5. Division of Labour in the University Teacher's Role.
6. Maintaining Standards at the Open College, University of East Asia.
7. The Hong Kong Problem: Hourly Paid Tutoring.
8. Prophylaxis: Training and Monitoring.

A paper presented to the Offshore Distance Education Conference on Breaking Geographic Boundaries. Penang, April 1987.

Session IV Ethics

10:00 - 12:30 a.m. Saturday 18th April

D F Swift

The use of foreign courses has a double purpose. First, it takes advantage of the finance and curriculum design expertise invested in its preparation in the originating country. Second, it provides an opportunity for instant achievement of the same exit performance standards. If the latter is to be achieved, the 'parasitic' institution has a major responsibility to train tutors in the syllabus and curriculum of the course, to monitor teaching and grading and to ensure the validity of the final examination.

1. Introduction: The Offshore Strategy.

The Government of Hong Kong is planning to establish a Consortium between existing institutions which will begin by using already designed courses from distance teaching universities of other countries. To my knowledge, this is the first example of a government planning an institution based upon offshore distance education.

This is not only financially and logistically necessary, but academically desirable. Use of well-designed courses from elsewhere will provide a sound base of academic provenance and a structure of standards. These are built into the course material. Standards are then maintained if courses are delivered and examined as they were designed to be delivered and examined. However, this half of the bargain is not easy to keep. It requires a level of systematic monitoring of teaching and examining that is not normal within traditional face to face settings. It also makes unusual demands of staff. Expertise in understanding and influencing educational processes must be high and the probity and commitment with which precisely defined duties are carried out must be of the highest order.

This is not to argue that distance teaching is in some way superior to face to face teaching. In total the role is very different, though many aspects are similar.

2. An Open Learning Course.

To establish this case we must look in a little detail at the procedures for organizing distance education in an open setting. We need to consider what is involved in the claim that use of existing courses can ensure that standards are being maintained. The implications of how this can be done will have important consequences upon the way in which teaching and examining of the course must be carried out. First, we should be clear about what is entailed in a course. In distance education

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* Education Commission Report No.2, Hong Kong Government, 1986.

this is a physical collection of material prepared in great detail by academic specialists, educational technologists and media specialists which will provide a more or less complete 'environment of learning' for the independent learner. It would have clearly specified academic objectives, learning activities designed to achieve them, and assessment strategies which will test that. My best example would usually be a UKOU course that took perhaps twenty man-years and cost about half a million pounds sterling to design.

3. Transferring Standards.

The first proposition is that an institution offering such courses from institutions whose standards are acceptable, that implements their assessment procedures fully, and that has a structure of courses leading to a degree of appropriate pattern and 'weight', is maintaining standards. To arrive at that conclusion we need to consider what is involved in traditional practices in validation and their philosophy.

The basic argument can be put in the form of caricatures. In the school-like institution students commit themselves full-time to a way of life which centres upon certain teaching and learning activities but which is very much more than that. For example, the student culture also influences how they develop in the period of membership of the very special society they have joined. Research in higher education has also emphasized the importance of the student culture in assisting a student to make sense of the curriculum. It limits study to what needs to be done in a course. It directs attention to advantages and disadvantages in course selection, appropriate strategies in examinations and so forth. In addition, students will have been 'selected' on criteria which have proved reasonably valid predictors of success within the institution. Finally, the nature of the traditional institution is based upon an assumption that once accepted into the life of the college and provided they follow its requirements, students will be permitted to leave it with a qualification.

None of these criteria can apply in the same way to an open institution or course. Courses must be designed with an independent learner in mind who must study in ways, in places, at times, and at rates which may differ from those imposed by the closed institution. As independent learners they may not be able to participate in the student culture. They must take the course as they receive it, doing what it requires and advises them to do. They are less able to rely upon student culture to help them to interpret the requirements of the course. Openness also usually means that the student body will be more heterogeneous than in an ordinary institution. As a consequence, the course material must be written to take this into account. Because of

these three factors, the assessment of the course must be a closer test of what the course requires the student to do than is usually thought necessary in a conventional institution. Crudely, the open course cannot simply try to sort out sheep from goats amongst a group of students who are assumed to be going to pass. It must face the likelihood that a high proportion will fail and justice demands that they should be failed on good grounds.

The essence of the argument is that open learning institutions are importantly different from traditional ones. A degree-granting institution, taking young people after some form of university entrance qualification, pretty well guarantees a degree to these who behave appropriately during the following three or four years. Thus, the conventional accreditation/ validation strategy is to evaluate library, staff qualifications, staff/student ratio, course syllabi, etc. This is a proper way to decide whether the society will give the institution the authority to award degrees to those who live within it for a certain period.

The distance learning case is very different. The analogue of the 'facilities' of a school-like institution is 'the course material'. In a conventional institution, the curriculum is the syllabus as delivered by a teacher. The pupil responds to this by making use of the 'facilities' of his/her learning environment - the library, discussions with other pupils, study/bedrooms, laboratories, etc. In the distance-teaching arrangement the course-material substantially replaces the facilities made available by the school. For example, it cannot take a library for granted. Everything a student must read must be part of the teaching material; every discussion prepared rather than left to chance within student culture (face to face teaching also controls this to some extent by formalizing discussion). To make a gross exaggeration; the distance teaching course material designs for the independent learner those aspects of curriculum that face to face teaching tends to assume (and, of course, tries to ensure) will take place in the culture of the school. Teachers in either setting design their instruction so as to take advantage of the learning environment available to the pupil. Since the settings are very different, the instruction is different. It would be inappropriate to judge the curriculum of distance-teaching by normal expectations of what is necessary to support a face to face kind of 'delivery system'. In the same way it would be unfair to judge a face to face setting solely on the quality of its preparation of learning materials. First and foremost, therefore, we must ask that the 'facilities' we afford our students be understood to be the teaching materials. These should then be judged by evaluating their ability to stimulate appropriate developments in students.

The alternative way to look at the issue is to see that the quality of a conventional institution tends to be thought of as a

mixture of the standard of entering students, the quality of teachers, the kinds of facilities and the all-round performance of students. The standards of an open learning course or institution must be defined principally in terms of the exit performance of the successful students on each course. Because of our unconventional methods,we, much more than conventional institutions, put that in the hands of academics from other universities. The results are higher drop-out and failure rates; but also the right to say exit-performance is comparable.

If the first proposition is accepted in theory we need to consider what is entailed in practice before we can decide on whether it can really be done. That is, we need to describe what the parasitical institution must do to ensure that the theoretically possible actually occurs. Before doing that we need to distinguish between two very different ways in which the term 'standards' may be applied in an institution.

4. Two Versions of Standards.

The discussion so far has begun to distinguish between two versions of the concept 'standards of the institution'. Exit standards are the criteria for grades in particular subject areas. They are what the institution means when it talks about an A in B106 Introduction to Marketing, 83% in S334 Oceanography or a 2ii in Chemistry. A second version attempts to describe a cohort of the institution - perhaps the first year of students, the graduands, or the entire student body. This is what is in mind when one institution is described as being of higher standard than another. Therefore, one can imagine that, with the same exit standards (first definition), one institution might produce a profile of I-10%, IIi-30%, IIii-30%, III-10%, Pass-10%, while another might produce I-5%, IIi-10%, IIii-30%, III-35%, Pass-20%. On the face of it, the first university appears to be of higher standard (second definition) than the second. However, they may have very different degree-completion rates. Thus, if with a similar quality of entry cohort, the first institution has an ultimate graduation rate of 25% of initial registrants and the second has 50% we might look upon the latter as having higher standards of performance. Standards in this latter usage are still the responsibility of the parasitic institution. The responsibility for maximizing the performance of the student body is importantly its own. It cannot be said to be solely its own because it is also importing the designed curriculum by means of which the students are to be raised to the exit levels. Nevertheless, there is an important area of responsibility left to it.

Consequently, when we say that the parasitical institution is adopting the standards of another institution we must be clear that we mean only that the grade, when awarded, means the same in both institutions. The parasite may be much worse (or much better) at getting its students to that grade.

Performance on the second version of standards leads to judgements about the quality of the institution. What the proposed Open Learning Consortium can achieve in this respect will depend upon two factors: how well it trains its academic staff in the tasks of administering an open learning system, and how thoroughly it monitors their work to ensure that evaluation and teaching is reliably carried out.

5. Division of Labour in the University Teacher's Role.

Experience in universities that offer open education by distance teaching methods leads to a quite radical conclusion about the role of university teacher. In the face-to-face setting it must be a multi-faceted one in which the teacher is a researcher, syllabus-designer, teaching-method designer, lecturer, seminar leader, evaluator and often, examiner. In the open setting each of these may be performed by different people. This has several of the kinds of implications that follow from any development in the division of labour in an industry. It makes possible very much greater scale of operations; there are also increasing returns to scale; modus operandi can become more flexible; training of personnel can become more precise; but, supervision to ensure coordination becomes more necessary. Thus, as we are able to separate two aspects of the concept 'standards of the institution' which would not need to be separated in the school-like institution, so we are able to separate ordinarily inseparable aspects of the teacher's role.

The consequent practical situation is that 'the course' (or independent learner's learning environment) is designed by a multi-disciplinary team of specialists led and controlled (one hopes) by the subject-matter specialist. Once produced, the operation of this learning environment, which includes its student assessment procedures, needs to be supervised. Students will need a tutor who will teach on the assignments, opportunities to attend seminars (probably with the same tutor) at which difficulties in learning the course can be dealt with, day or week-long schools at which a further range of learning experiences can be provided, and perhaps recourse to councelling advice on problems of learning that are not course-specific. The institution will need to ensure that all these services are provided and appropriately performed. It will also need to ensure consistency of grading on assignments across all students of the course and a final examination that fairly tests the entire course according to the contract offered to the students in the curriculum of the course. This latter is particularly important in the open learning setting because there can be no assumption that most students are going to pass. Particularly in the foundation year it must be assumed that a high proportion will fail.

This all adds up to a more technological approach than is necessary in school-like institutions and a more precise set of requirements to be imposed upon the tutors who are assisting students in the course. For example, they may not spontaneously change the curriculum or the syllabus (both are given by the course). They may not grade idiosyncratically (grades are part of the final examination and whilst some leeway may be given to use grades for inspiration rather than evaluation, even that will be a defined policy for the course). As a consequence of these requirements and of the many tutors who may be involved in a single course, the relationship between tutor and student must be monitored both for quality of teaching and for consistency of grading.

6. Maintaining Standards at the Open College, University of East Asia.

Exit standards (first version) at the Open College (OC) are maintained by two basic strategies.

a) Each individual course at all levels is externally monitored and examined or assessed.

Conventional external examining can be characterized as taking place principally at the point of final examination and for graduation purposes. The external examiner tends to concentrate on the final examinations at the third year level. Reviews of examinations at second and possibly even first year level may take place but usually in a subsidiary way - perhaps if third year examining concludes that there is a problem of curriculum or examining at the early levels. OC examining/monitoring takes place on each course at all levels as if it were the final one. Because the degree is achieved by accretion of credits, this is a logical extension of the traditional approach.

b) The examining/monitoring is continuous throughout the period during which the examinee is studying the course.

There is a trend in universities to include assessment of assignments as part of the final grade. This tends to take the form of a review by the external examiner at the end of the degree course, long after the work has been done and with no possibility of the external examiner influencing it. It seldom happens continuously. Thus, it ought to be called final assessment of course-work.

In the OC, the levels of achievement during the course form part of the student's final grade for that course. How this is calculated varies across courses, but it happens in all courses and it is never a meagre contribution to the final grade.

According to the continuous strategy, the examiner's views on the quality of teaching on the assignments and of appropriateness and consistency of grading, can be fed back into the teaching and grading. As a consequence of this double process of continuous examining of the student and simultaneous observation of teaching and grading by the external examiner/assessor, he or she is in a better position to participate in the decision-making at the end of the course. The examiner is not merely assessing the final papers, but both the whole performance of the student on the course and the performance of the course upon the student.

At present the college uses two versions of external examining which are denoted by the use of the terms external examiner and external assessor. External examiners are used in relation to courses from the UKOU, Royal Melbourne Institute of Technology (RMIT) and Open Learning Institute (OLI). External assessor arrangements are made with Massey University for most of the OC Business School courses. The assessor system is much less desirable on educational technology grounds but, with some patchiness, it is satisfying the terms of our agreement with Massey University.

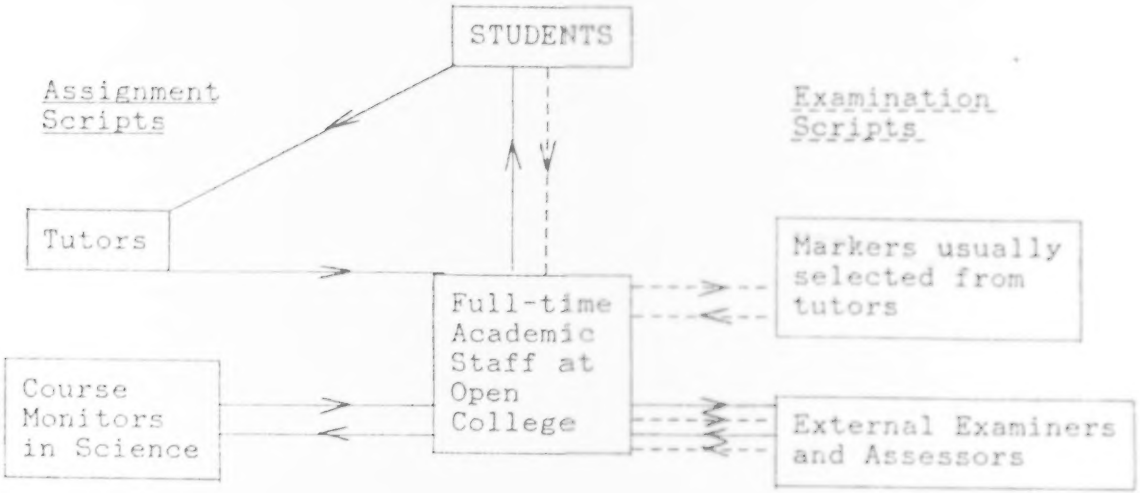
Essentially, the external assessor does what the external examiner does with one very important omission. The external assessor also does more than the external examiner in so far as the assessor participates in the curriculum development aspect. That is, Massey courses are modified to suit our needs by a process of negotiation with the external assessor, who is also the Controller of the same course at Massey. At least this is ideally what should happen. However, at this distance and with the kind of material that Massey produces, this relationship between academics can be more a matter of form than of content.

The omission is that the assessor does not make or participate in the final grading decision on the student. This is done entirely within the college. The assessor's role is to pronounce upon the <u>fait accompli</u> and to propose changes for the future. The system was devised in the context of the agreement with Massey University and takes account both of problems of distance and communication, and of the large number of small courses involved. However, I look upon it as a phase prior to imposition of the external examiner element at the final grading point.

For the academic year 1985-6 about sixty-five courses had about forty examiners or assessors (some look after more than one course).

The flow of assessment material (continuous and final) between students, full-time academic staff, part-time tutorial staff and examiners/assessors, is shown in the chart below:-

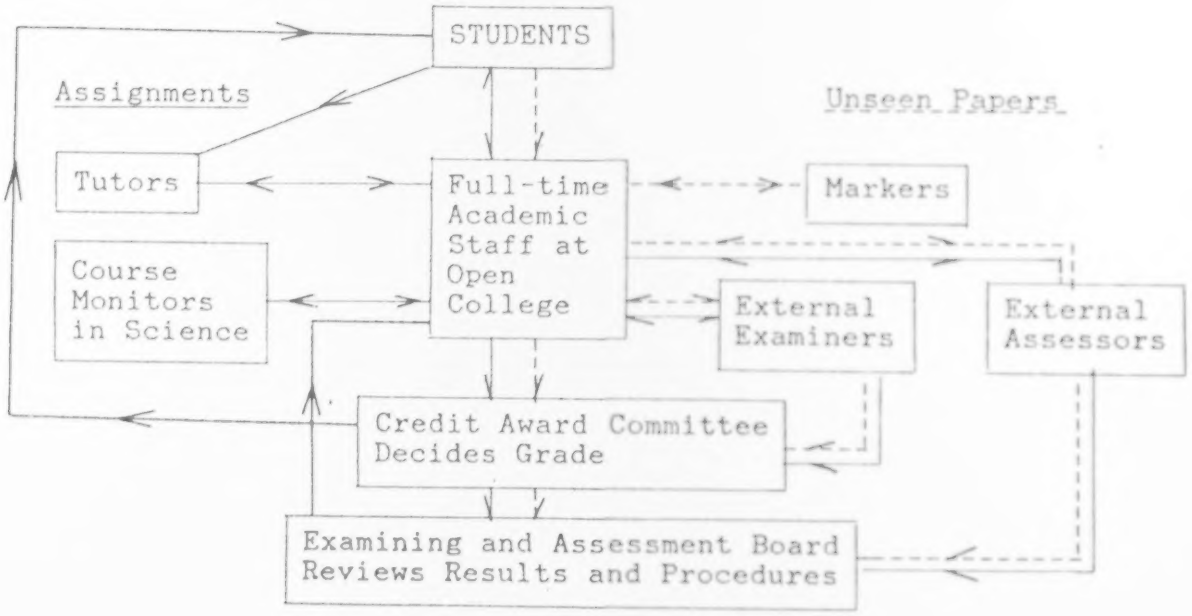
The Flow of Examinable Material



Assignment scripts are first marked by tutors, then passed to the academic staff at the Open College for assessment. Selected samples of these scripts (sometimes, all in courses where the student numbers are small) ranging from the highest to the lowest grades are sent overseas for further assessment.

Examination scripts are first collected by the academic staff at the OC who distribute them to markers. The marked examination scripts are returned to the academic staff for assessment and then mailed overseas in the same way as the assignment scripts. Grades are then presented for review and decision by the relevant Credit Award Committee.

The Flow of Information on Grading



Thus, it will be seen that the Credit Award Committee makes the final decision on a student's grade. The committee does this on the basis of marks that are the result of interaction amongst tutors, full-time academics, and examiners.

In the case of Massey courses, the assessor does not participate but reports to the Examining and Assessment Board. This is the weakness in the system. Ideally, one would recommend another institution to remove the External Assessor loop altogether. It is OC policy to do that as Massey courses are replaced by our own or courses from other institutions. This process will be about half way to completion during the academic year 1987-8.

Assuming, then, that an institution using another's course fully implements the flow of information and the decision-making process described in the above diagram, minus the External Assessor's loop, the exit standard can be guaranteed as well as these matters ever can. (Please see Annex A for a Code of Practice on Use of External Examiners and Assessors.)

This conclusion has an important implication that is worth stressing. An institution that offers courses from institutions whose standards are acceptable, that implements their assessment procedures fully, and that has a structure of courses leading to degree of appropriate pattern and 'weight', is being continuously validated. If one accepts this line of argument, there is no need to 'validate' a parasitic Open College in the traditional way. All that is needed is a thorough external examining procedure. This will ensure that courses have appropriate academic provenance; that each has a thorough external examining system within it; and that appropriate supervision is given to ensure that the assessment objectives that have been written into the course are thoroughly met. By adopting this strategy, Hong Kong will be able to establish a high quality institution of higher education at a fraction of the normal cost - either of a traditional, or of a distance teaching institution.

7. The Hong Kong Problem: Hourly Paid Tutoring.

This, then, is the educational task for which the Consortium and its members will be recruiting full-time and part-time staff. It is my contention that educational theories and practices in Hong Kong are strongly antithetical to the sophisticated educational technology and enlightened educational theory that are implicit in this new educational environment.

The bases of the problem are the general theories of education that are implicit in schooling in Hong Kong. They may be characterized as assuming that 'education' takes place when teachers speak syllabus to groups of students who are expected to play a passive role in memorizing clusters of words, formulae and mental operations that are thought to embody what is to be

learned. These clusters need then to be repeated in examinations in response to relatively clearly defined stimuli to which the syllabus sets out relatively fixed responses. Regurgitation of recipe knowledge is, of course, an important aspect of any process of education. The problem in Hong Kong is that, for a variety of reasons, it tends to be the overpowering emphasis.

This approach to imparting knowledge has made possible the growth of a large cottage-industry of part-time tuition. It comprises large numbers of people who accumulate considerable loads of after-hours tutoring. If the hours for which the tutor is paid are organized by the tutor to comprise the full extent of his or her commitment, this can be extremely lucrative. Unfortunately, the caricature of knowledge-imparting makes this fairly easy to achieve, principally when the courses on which the moonlighter teaches are not internally monitored and externally examined properly. They are usually one of three kinds. First, they may be independent teaching for an authority's examination; for example, Professional examinations or A level. In these cases, pass rates are so poor that it is difficult to hold the tutor responsible for failure. Second, they may be certificate of completion courses in which attendance is the main criterion. Finally, they may carry some kind of qualification from an established institution which is nevertheless, poorly internally monitored and only perfunctorily externally examined. In this latter type, the principal pressure on the tutor is to ensure future employment by achieving good completion rates. This usually takes the form of establishing a strong implicit contract with the student according to which attendance guarantees acquaintance with the final examination, such as it is.

Some characteristic practices of this evening mode of teaching are: repetition of 'lectures' given elsewhere of ancient vintage and regardless of need; reading from textbooks as part of the lecture; pirating of 'handouts' with little regard for appropriateness; inadequately designed curriculum; incomplete syllabus; curriculum designed to minimize student assignments and the need to 'grade' them outside the lecture time; and poor quality teaching on assignments.

As in all cottage-industries the labour force has assumptions about how jobs can be got, kept and changed. For example, groups may work together to corner slices of the market, each member perhaps achieving a position of importance in one institution, then finding work for friends in exchange for work in other institutions. This is particularly strong in the growth areas of business studies like computing and accounting. In these fields it is entirely possible to find one person teaching in several institutions using the same material and exchanging it with other members of the ring. It is also common practice to assign ones 'own' lectures to another or to exchange them. A ring can also become an embryo tutorial college. When the members have collected enough syllabuses from other institutions they may then rent classrooms and offer courses independently.

The intention in specifying these educational iniquities is to stress that they make it difficult to achieve a professional relationship with the student. The authority of the teacher and his or her right to teach without interference then become part of a strategy for maximizing income rather than for defending the integrity of the teaching process. Objective examining is an absolute necessity in open learning. To be fair it should involve continuous as well as final assessment. Both of these are seriously prejudiced by the practices I have described.

8. Prophylaxis: Training and Monitoring.

Consequently, it is essential that the Consortium should have substantial briefing and training programmes and clear, systematic and continuous procedures for monitoring the work of full-time and part-time academic staff. The latter will be designed into the course and an external examining arrangement should ensure that it is followed. Ideally, the former should be run by the Consortium itself, possibly offering a Postgraduate Certificate that may ultimately become a requirement for employment. It should be a distance-taught course involving regular training sessions designed to prepare potential tutors for the practical tasks of supporting independent learners. Its principal objective should be to replace the authoritarian, punitive and exploitative approach that new tutors are likely to bring with one better able to accept responsibility for student performance and more concerned to maintain the reality of exit standards than with the management of impressions about them.

THE OPEN COLLEGE

U. E. A.

Code of Practice

On The Use of

External Examiners and Assessors.

DFS OCT 1985.

1.0 Preamble

There are various problems associated with the role and participation of our external examiners/course assessors. In some cases courses have been completed without the course material, continuous assessment, final examination, or samples of marking/tutoring being seen or approved by the external assessor. The reasons for this can be inefficiency and/or timetable crises on our part, or a "laissez-faire" attitude on the part of some external assessors. As the time is approaching when we will be presenting our courses for approval/recognition it is essential that we have good systems of external examination and assessment in position within each course. We must then ensure either exemplary performance by the course in these respects or obvious signs of improvement. Finally, mere improvement may not be good enough for a final year or honours course. The external examining/assessment system must be working properly and the externals satisfied with standards.

2.0 New Courses

2.1 Where a new course is being 'lifted' without change from another institution there seems little need to seek comment/approval from the external. However, with such a course it is essential to discuss with the external or consultant whatever plans are being made to allow for any non-transferrable component of the course, e.g. summer school, assignment or experiment.

2.2 For courses where substantial alterations are made to the original versions, advice/comment on the proposed changes should be sought from the external. 'Tame' externals/assessors who pass such changes without seriously looking at them should be discouraged from doing so. OC claims to bring the "best from around the world" and any lack of serious review in such cases by experienced senior academics will not encourage confidence in this slogan.

2.3 Where substantial changes are made, there may still be a distinction to be drawn between courses which are acceptable by the external examiner or assessor as directly transferrable to the originating course and those which no longer receive that approval. This distinction probably applies to OU courses more than elsewhere.

2.4 The process of discussion with a Massey assessor should be premissed on the assumption that the course will be transferrable. Where this does not appear to be feasible, there is no need to use a Massey assessor and we should look for a local external examiner.

2.5 Continuous review over presentations is a permanent requirement of all proper assessment/examining. Where the course is relatively easily revisable, evaluations by students can be carried out to ensure that year by year changes are beneficial ones.

3.0 Continuous Assessment

3.1 In all OC courses, continuous assessment plays an important role in both the grading and the teaching of students. (It is also an important 'feed back' mechanism for evaluation of courses and tutors.) We should rely on external assessors to ensure that grading is of the required standard and to help with the development of better teaching on TMAs.

3.2 Grading. An external assessor must judge three things in this area - the standard and relevance of the questions with regard to the course content; the appropriateness of the marking scheme; and how well the tutor has followed the scheme.

3.2.1 These three evaluations need not be done at the same time. Indeed, where the assignments are not taken directly from the 'home' institution, the external assessor should be given an opportunity to review them and their marking schemes as soon as possible. Then, if the external has any serious complaints, there will be time to take appropriate action before grading of students.

3.2.2 Copies of sample TMAs should be sent to the external for comment on the grading and teaching of tutors. When properly carried out, the external's advice could result in an alteration in the weighting of individual TMAs or, at the end of the course, of the entire continuous assessment. It can also be a vital element in individual decisions relating to resit or retaking of the course.

3.2.3 The size of the sample of TMA scripts to be reviewed by the external should be agreed upon in advance for each assignment. Gradually, as rapport with the external develops, it becomes possible to vary the sample for specific purposes. For example, an external might identify a particular tutor as poor in his/her teaching or excessively generous in grading. The next time the course coordinator might send an extra weight of that tutor's assignments as part of a check to ensure that the coordinator's advice to the tutor was being followed.

3.3 Teaching. In most cases we are still relatively inexperienced in the training of tutors. The external assessor's experience with the course can be a tremendous help here. The TMA samples supplied should enable the enthusiastic external to produce examples of 'comments to tutors' for the course co-ordinator. It cannot be stressed too strongly that a prime responsibility of the course coordinator is to monitor the quality of teaching of the tutors; to advise, encourage and where necessary, instruct them. The external assessor/examiner should be a guide in this.

4.0 Final Examination

In traditional education the final examination has been looked upon as the best guide to standards. Universities and professional bodies request copies of the papers when considering recognition, etc. This must be one area in which we take the greatest care to maximize the involvement of the external assessor.

4.1 Final examination paper. We invite disaster by allowing students to take an examination which may be seriously criticized later in the external's report.

4.1.1 Final examination papers and marking schemes must be approved by the external assessor before the paper is used. As with the assignments, the external's experience will prove invaluable in ensuring that the paper is a fair representation of the objectives of the course.

4.1.2 Additionally, since so many of our examinations are prepared by a single academic, the use of an additional reviewer is, at the very least, a good way of reducing the external's criticism of the draft paper.

4.2 Marking. Basically this should be treated in the same manner as the TMAs, but with greater urgency.

4.2.1 At least a proportion of papers and questions should be monitored, preferably by re-marking them yourself. Weaknesses spotted by the external should be reported in time to enable alterations to be made for the next presentation.

4.2.2 Comments on the standard of marking must be obtained before or at the Credit Award Committee meeting and form part of the report to the Exam Board.

4.3 Grading. We advertise that we assess students at the same standard as that used by the 'home' institution. In some cases practice seems to ignore this.

4.3.1 The grading procedure as recommended or approved by the external should go on record.

4.3.2 The external should be asked to comment appropriately in his/her report whenever this is deviated from. Whenever possible the assessor/examiner should be physically involved in the grading. Grading by telephone can and has been done. It works well provided that a working relationship has already been established, the material for the external has been sent on time, and the subject of the telephone conversation carefully explained in earlier correspondence. Telex is a most efficient method for transmitting final grades.

5.0 The Intangibles.

5.1 In all the above aspects of the coordinator's responsibilities one can distinguish between on the one hand, the mechanical, bureaucratic aspects which must be done and be seen to be done, and on the other, the intangible aspects of how and how well they are done.

5.2 The essence of professional performance is to be found in the latter. It is straightforward to ensure that 10% of assignments go to assessors, that marking schemes are agreed in good time, that tutor-performance in grading or returning of scripts is monitored, and so on. These are vital, but they are only the first 10% of the job.

5.3 What distinguishes the coordinator's task from its purely clerical base is the quality of the academic relationships that are generated with tutors and assessors/examiners. These intangibles are the remaining 90% of the job.

5.3.1 How you develop a dialogue with the examiner/assessor is crucial to the quality of the improvement you can introduce into your course or programme of courses. It is not possible to write rules for this. In general, you should get to know your assessor/examiner, involve him/her at all levels, take and respond to advice.

5.3.2 It is perhaps easier to be more precise about your relationship with your tutors. They are working for you and you are responsible for the quality of their work. However, how you handle the day to day relationship with them will depend very much upon their experience and performance. Perhaps the best piece of advice is to establish a cooperative approach to the task of improving quality of teaching. We can all improve. So for example, a useful initiative by one tutor can be shared with others - " You might like to try...." Above all they must know that you monitor their teaching, you must offer advice where it is needed and you must seek to learn from the good tutors.

5.3.3. As a minimum you should require them to read and emulate the OLI and OU Training documents on distance teaching.

5.3.4 In relationships with assessors/examiners and tutors alike, the key seems to me to be that you make your joint responsibility to the students the focus of your relationship. The purpose of your joint effort is to serve their educational interests and to do justice to them in the last analysis.

INFORMATION AND DOCUMENTATION IN DISTANCE EDUCATION

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The importance of information and documentation on distance education has come to be widely recognised only in the very recent past. Today, whenever a new international or national association of distance teaching institutions is formal, a reference to information collection and dissemination is inevitably included in its constitution. It secondly, is increasingly common for new distance teaching institutions and conventional institutions planning to teach at a distance to attempt to survey previous practice and to attempt to benefit wherever possible from other institutions' experience and course output. Thirdly, the number of postgraduate and institutional research projects is rapidly proleferating, necessitating extensive literature searches and information surveys. Why has this sudden upsurge of interest come about? In my view, the major, interrelated, reasons are that distance education has expanded very considerably in many parts of the world; that it generally enjoys much higher status now than formerly in relation to face-to-face teaching; and that the quantity of information and documentation produced by distance teaching institutions and their staff is increasing rapidly in volume. New technology is also making it possible to assemble information so that it can be retrieved in the most helpful form for users.

More and more institutions are building collections of distance education literature, for example, the Open Learning Institute and Athabasca University in Canada, Deakin University in Australia, the Fernuniversitat and DIFF in WUK Germany, and the Dutch Open Universiteit. With some exceptions amongst these institutions, the universal widespread interest in information and documentation has not so far been backed by pro provision of adequate resources, particularly in the area of staffing. Many of the most important types of documents such as planning reports, research reports and prospectuses are available free of charge but bracing, ordering and cataloguing

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them are demanding functions in terms of time. It is essential to have someone available on a full-time basis who can perform these functions, and who knows the collection well and can provide sensible information from it. Staff salaries form by far the largest item in the budget of an adequately resourced documentation centre as distance education; very few institutions have staff member, working full-time in this area. Most distance education collections are in fact maintained as part of the institution's library rather than as a separate unit.

In the meantime, the International Centre for Distance Learning (ICDL) has been established on the Open University campus in the UK with funding from the United Nations University to begin to fill the information gap and to help other institutions with similar interests. Genuine international cooperation is essential in the long term if proper coverage of distance education literature and information worldwide is to be achieved. One possible direction for future progress is a coordinated international network of institutions, each one of which specialises in literature and information emanating from its particular country or region. A start has been made. At the 1985 International Council for Distance Education World Conference in Melbourne, an informal working group on bibliographic databases was established, with members from Australia, Canada, West Germany, Spain, Venezuela and the UK. Strong expressions of interest have also been received since the conference from other institutions in these countries, and from Argentina, Denmark, the Republic of Ireland and the Netherlands. The group agreed on a standard format to be used for computerised cataloguing of distance education Literature, and gave ICDL carte blanche to develop a system. An extremely flexible, powerful and user-friendly system has now been designed, and development work is almost complete. The data entry part of the system has already been

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pilot-tested, and the retrieval facility will be available later this month. In collaboration with the Open University (OU) Academic Computing Service, which has done the development work, system will be made accessible on-line, will be transferred on to compact disc, and will be capable of accepting data generated in other institutions. The groundwork is, therefore, laid for a multi-access, international catalogue of literature on distance education.

A second major development, relating to information rather than to literature, is perhaps of greater immediate interest to this seminar. ICDL's database of basic information on distance teaching institutions, originally designed in 1983, is to be re-designed in the second half of 1987 to meet the changing needs of users. The most significant additions to the database will be a greatly extended list of subject areas taught, so that it will be possible to search for programmes in which, for example, chemistry and philosophy are taught, rather than being restricted as at present to the very general terms 'science' and 'arts'. The list of fields in the category 'media and methods' will also be expanded, as will the directory section which will include telephone, telex and facsimile numbers and electronic mail addresses where available. The system to be used to carry the database is likely to be an adaptation of the ECCTIS (Educational Counselling and Credit Transfer Information Service) database maintained at the OU.

ICDL is about to become involved in the activities of the newly-formed European Association of Distance Teaching Universities and also possibly with the European Community funded SATURN (Scientific and Technological Updating through Remote Networks) Consortium, the Presidents of both of which organisations are based at the OU. These involvements may well give scope for the

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development of additional databases which will be of interest outside as well as inside Europe. Suggestions have already been made to ICDL concerning the possibility of a database of information on individual courses, including such details as whether a course has been used in other institutions. This type of database would need to be restricted initially to specific subjects and/or geographical areas and would require renewable external funding, but the suggestion points, I believe, to a second direction for future progress, where the requirements of users will be paramount, not the convenience of producers, as has been the case too often in the post. The continuing development of high technology and the increasing involvement of international agencies in distance education should enable the compilation of databases and transmission of information in future to closely match the needs of distance teaching institutions.

The International Centre for Distance Learning

The International Centre for Distance Learning (ICDL) monitors developments in distance education worldwide and maintains an extensive collection of literature on distance education. An international information service is based upon its information and documentation resources. The nucleus of ICDL was established between 1978 and 1980, when the Ministry of Overseas Development provided financial support for the Open University Centre for International Cooperation and Services. ICDL was set up in its present form in 1983 with the support and cooperation of the International Council for Distance Education (ICDE) and the United Kingdom Open University (OU), with funding from the United Nations University (UNU) based in Tokyo. It is located on the OU campus. ICDL's staff comprise an Honorary Director, Lord Perry, the founding Vice-Chancellor of the Open University; a Documentation Officer, Keith Harry; and an Information and Documentation Assistant, Nazira Ismail. The UNU Global Learning Division supports ICDL's activities by reason of its particular interest in distance education as a potentially effective tool in its own work. Since the purpose of the UNU is, by supporting research activities, to address problems faced by developing countries, ICDL is very much committed to information collection and dissemination in relation to developing as well as developed countries. During the period 1986-88, financial support has also been granted by ICDE.

The information service which ICDL operates is open to any enquirer from any country through whichever communication medium is most convenient or effective- mail, telex, telephone, electronic mail, computer conference, or personal visit.

ICDL has two main resource collections upon which its information service is based. One is a collection of documents, the other a computerised database. The document collection has three main sections; general and theoretical works on distance education; representative samples of course

materials produced by distance teaching institutions; and, by far the largest section, a collection of prospectuses, reports, journal articles, books and papers relating to all types and aspects of distance teaching in over 80 countries at all educational levels.

In order to cope with enquiries about particular aspects of distance education such as course creation, media and methods, and costs, a subject index is maintained which covers all types of literature received. The subject index is in process of computerisation. A custom-made bibliographic database system has been designed and developed by the Open University Academic Computing Service and handed over for pilot testing in February 1987. The Thirteenth World Conference of the International Council for Distance Education held in Melbourne, Australia, in August 1985, saw the first steps taken towards the collaborative development of this system with the setting up of an informal bibliographic database working group which includes members from Australia, Canada, Spain, Venezuela, West Germany and the UK. The aim is to create an on-line database which will enable people based in countries which can link into the international communications network to search direct from their own institution in the same way as they currently search databases like ERIC. It will be possible to search by subject, by author, by title, by date, etc. For people unable to make use of this facility direct, a search system based on telex or telemessage, with actual searches being made by ICDL staff, will be used. Such a database will also simplify the production of ICDL's quarterly New accessions list which is distributed to around 50 countries and provides an updating service on new publications in the distance education field. It is anticipated that the database will become generally available on compact disc before the end of 1987 as an alternative or as a supplement to the on-line facility. A complete copy of the database on compact disc will enable users to undertake their own searches in their own time in their own institutions. The Centre's database will occupy spare space on a disc produced on a regular basis for another department of the OU. Future updated versions of the ICDL database will appear at six monthly intervals. Whatever the forms in

which the database is eventually made available, an alternative service will continue to be provided for people who still need to contact ICDL direct for information.

The second major information resource is a computerised database of basic information on distance teaching institutions which is on the Open University's Sperry/Univac mainframe computer. The information in the database has been supplied by institutions themselves on a specially designed standard form available in English, Spanish and French. The initial collection exercise in 1983/84 brought in responses from 400 institutions. The first updating, undertaken in 1984/85, has increased the number of institutions represented to over 500. The great majority of the world's major distance teaching institutions are represented in the database. A partial updating was undertaken in 1986 and a further full updating will take place during 1987.

What kinds of enquiries can be answered from the database? Broad questions such as 'Which institutions teach at a distance using radio?' or 'Which institutions teach agriculture at a distance?' or 'How many institutions teach at a distance in South and Central America?' can be very easily answered. It is also possible to obtain a speedy response to more complex questions. The three separate broad questions given as examples could be combined to ask the question 'Which institutions in South and Central America teach agriculture at a distance using a radio component?' The search could be narrowed even further by specifying a particular language of instruction, a particular country, a particular educational level, and/or a particular type of entry requirement. Information can be retrieved from the database in many different configurations and has already been used for many different purposes. Amongst the commonest types of user so far are potential students seeking courses in particular subjects and countries, postgraduate students trying to gain a picture of distance education provision in a particular subject area to further their research, and course planners looking to identify courses already being offered elsewhere in subjects of particular interest to their institutions.

Lord Perry's report **The state of distance-learning worldwide,** published by ICDL, is an analysis of information obtained from a series of searches made on the database in May 1984.

Through the Academic Computing Service VAX mainframe computer, ICDL has access to the OU electronic mail and computer conferencing system, to the University of Guelph computer conferencing system (CoSy) in Canada, and to other international networks. These systems are being used increasingly frequently by ICDL for sending messages, for receiving and answering enquiries, and for exchanging information.

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March 1987

UNITED NATIONS UNIVERSITY
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Assistant

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Keith Harry

Nazira Ismail

GENERAL AND THEORETICAL SECTION

P.BACSICH, A.KAYE and P.LEFRERE, 'New information technologies for education and training- a brief survey', Oxford surveys in information technology, vol.3, 1986, pp.271-318 (DL4)

F.J.CHACON-DUQUE (1985) Building academic quality in distance higher education: a monograph in higher education evaluation and policy. University Park, Pennsylvania State University (Center for the Study of Higher Education, 325 Pond Lab, University Park, PA 16802, USA) vi,63p. ($5.00 prepaid, $6.50 on invoice) (DL12)

COMMONWEALTH SECRETARIAT (1986) Commonwealth student mobility: commitment and resources. Commonwealth Standing Committee on Student Mobility. Fifth report. August 1986 (Marlborough House, Pall Mall, London, SW1 5HX) 57p. (Commonwealth Secretariat section)

T.DODDS et al. (1986) Refugee education: the case for international action. Cambridge, International Extension College/World University Service (IEC, Office D, Dale's Brewery, Gwydir St, Cambridge, CB1 2LJ) 48p. ISBN 0-903632-37-3 (DL1)

J.M.JEWSBURY and C.M.DEERING (1986) Distance education in the training of community health workers. London, Commonwealth Secretariat (Marlborough House, Pall Mall, London, SW1Y 5HX) 32,[14]p. (£4.00) (DL3)

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S.MURGATROYD (1985) Counselling and helping. London, British Psychological Society and Methuen (11 New Fetter Lane, London, EC4P 4EE) 165p. ISBN 0-901715-41-7 (£4.95) (DL9)

H.PROCHAZKOVA (1986) Information and the teacher. Prague, European Information Centre of Charles University for Further Education of Teachers (Kaprova 14, 110 00 Prague, Czechoslovakia) x, 273p. (Czechoslovakia section)

UNITED NATIONS UNIVERSITY (1986) Retrospective on the future: the United Nations University after 10 years. A colloquium, 12 December 1985, Tokyo, Japan. (Toho Seimei Building, 15-1 Shibuya 2-chome, Shibuya-ku, Tokyo 150, Japan) (UNU section)

UNIVERSITY OF LONDON Institute of Education. Department of International and Comparative Education. Vocationalising Education Conference, 7-9 May 1986. [Set of 25 papers] Papers include J.JENKINS et al., Distance teaching: a catalyst for curriculum change for introducing vocational subjects 14p. (£10.00 + postage from Dept of International and Comparative Education, University of London Institute of Education, 20 Bedford Way, London, WC1H 0AL) (Papers filed with countries. Jenkins paper at DL1)

WORLD BANK Education Department. Education and training series, Discussion papers:
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C.A.YATES (1986) The teaching of science and technology at a distance. A dissertation submitted in part-fulfilment of the requirements for the degree of Master of Arts at the University of London, University of London Institute of Education, September 1986. vi,171p. (DL3)

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INTERNATIONAL COUNCIL FOR DISTANCE EDUCATION BULLETIN, vol.13, January 1987 (Open University, Regional Academic Services, Walton Hall, Milton Keynes, MK7 6AA) See photocopy of contents page at the end of this accessions list (Journals section)

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MEDIA IN EDUCATION AND DEVELOPMENT, vol.19, no.4, December 1986 See photocopy of contents page including address for subscription details at the end of this accessions list (Journals section)

PROGRAMMED LEARNING AND EDUCATIONAL TECHNOLOGY, vol.23, no.4, November 1986 (Subscription details from Kogan Page, 120 Pentonville Rd, London, N1 9JN) See photocopy of contents page at the end of this list (Journals section)

AFRICA

C.B.W.TREFFGARNE (ed.) (1986) Education in Zimbabwe. London, Department of International and Comparative Education, University of London Institute of Education (20 Bedford Way, London, WCIH 0AL) (DICE occasional papers, no.9) 53p. ISBN 0-85473-257-8 (£1.50 + postage) Includes B.S.M.GATAWA, 'The Zimbabwe Integrated National Teacher Education Course (ZINTEC)', pp.13-26 (Zimbabwe section)

WORLD BANK Education Department. Education and training series, Discussion papers:
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EDT 22. J.AUERHAN et al. (1985) Institutional development in education and training in Sub-Saharan African countries xii,110p. (Africa section)
(66 avenue d'Iéna, 75116 Paris, France)

JOURNAL OF THE AFRICAN ASSOCIATION FOR LITERACY AND ADULT EDUCATION, vol.1, no.2, 1986 (US$5.00 per copy from the Association, P.O.Box 50768, Nairobi, Kenya) (Africa section)

ASIA

R.ROY SINGH (1986) Education in Asia and the Pacific. Retrospect: prospect. Bangkok, Unesco Office for Education in Asia and the Pacific (P.O.Box 1425, General Post Office, Bangkok 10500, Thailand) 187,vii p. (Asia section)

STATE LEVEL COMMITTEE ON OPEN UNIVERSITY IN MAHARASHTRA (1985) Report of the State Level Committee on Open University in Maharashtra (Department of Education and Employment, Government of Maharashtra, Mantralaya, Bombay 400 032, India) iv,54p. (India section)

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AUSTRALASIA

M.BRAY (ed.) (1985) Education and development in Papua New Guinea: issues for planners. London, Department of Education in Developing Countries (now the Dept of International and Comparative Education), University of London Institute of Education (20 Bedford Way, London, WC1H 0AL) 71p. ISBN 0-85473-244-6 (£1.50 + postage) (EDC occasional papers, no.8) (Papua New Guinea section)

BUSINESS COUNCIL OF AUSTRALIA (1986) Report on education 30p. (Head Office and Research Centre, 10 Queens Rd, Melbourne, Vic 3004, Australia) (Australia section)

P.INGLIS (1985) Promoting positive learning attitudes: adult learning provisions, demographic characteristics and previous learning experiences as predictors of positive affective development by external students. A study of the learning experiences of fifty Weipa (Far North Queensland) students. Zillmere, External Studies Unit, Brisbane College of Advanced Education (Carseldine Campus, P.O.Box 284, Zillmere, Qld 4034, Australia) 29p. (Australia section)

P.TAYLOR and D.TOMLINSON (1984) Primary distance education: population, problems and prospects. A study of the pupil population served by primary distance education, the perceived needs of their home tutors and the adequacy of support services provided by distance primary schools in New South Wales, Queensland, Western Australia and the Northern Territory. Nedlands, National Centre for Research on Rural Education, University of Western Australia (Nedlands, WA 6009, Australia) 194p. ISBN 0-86422-015-4 (Australia section)

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10. M.E.KELLY (1986) A survey of use and evaluation of support services by external students 1983 60p. ISSN 0725-0223
(The Director, Division of External Studies, University of Queensland, St Lucia, Qld 4067, Australia) (Australia section)

ASPESA NEWS: NEWSLETTER OF THE AUSTRALIAN AND SOUTH PACIFIC EXTERNAL STUDIES ASSOCIATION, vol.12, no.2, August 1986 (Bruce Scriven, Secretary/Treasurer, ASPESA, External Studies Unit, Brisbane College of Advanced Education, Kelvin Grove Campus, Victoria Park Rd, Kelvin Grove, Qld 4059, Australia) (ASPESA section)

ASPESA PAPERS: OCCASIONAL PAPERS OF THE AUSTRALIAN AND SOUTH PACIFIC EXTERNAL STUDIES ASSOCIATION, no.1, 1986 (Editor, E.D.Meacham, Riverina-Murray Institute of Higher Education, P.O.Box 588, Wagga Wagga, NSW 2650, Australia) Includes K.S. de FREITAS and P.D.LYNCH, 'Attrition in teaching-at-a-distance programs', pp.1-4; D.W.ROBERTs, 'Very distant education at USP', pp.5-12; and E.D.MEACHAM and J.A.CROSS, 'The winds of change', pp.23-32 (ASPESA section)

EUROPE (EASTERN)

M.CERNA (ed.) (1986) In-Service Education of Science Teachers: proceedings of International Seminar, Bratislava, October 17-21 1983. Prague, European Information Centre of Charles University for Further Education of Teachers (Kaprova 14, 110 00 Prague, Czechoslovakia) 170p. (Europe section)

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T.AKSJØBERG (1986) The NKS School of Management: a Norwegian model for management training by combined instruction. [Paper to Fourth Conference on Education and Development in Organisation, 17-20 September 1986, University of Lancaster] 13p. (T.Aksjøberg, Norsk Korrespondanseskole, Postboks 5853, Hegdehausen, N-0308 Oslo 3, Norway) (Norway section)

J.BARTELS (1986) Absolventen des Fachbereichs Wirtschaftswissenschaft: eine empirische Untersuchung. Hagen, Fernuniversität Zentrum für Fernstudienentwicklung (Postfach 940, D-5800 Hagen, West Germany) 226,13p. (Germany (F.R.). Fernuniversität section)

P.BESNARD and B.LIETARD (1986) Adult education in Europe. Methodological framework for comparative studies II: analysis of adult education systems in Europe. Prague, European Centre for Leisure and Education (Jilská 1, Prague 1, Czechoslovakia) (Studies and documents, no.23) 93p. (Europe section)

EUROPEAN CENTRE FOR HIGHER EDUCATION (CEPES) (1985) Efficiency in higher education: results of a workshop on the evaluation of Unesco-sponsored postgraduate training courses in the basic sciences, organized by the Division of Scientific Research and Higher Education of Unesco, in co-operation with the International Postgraduate Association for Science and Technology (IAST), Suzdal, USSR, 12-15 December 1983. Bucharest, CEPES (rue Stirbei Voda 39, R-70732 Bucharest, Romania) 149p. ISBN 92-3-102350-0 (US$5.00) (Europe section)

EUROPEAN CENTRE FOR WORK AND SOCIETY (1986) Euro TecneT: new information technologies. Compendium. Maastricht, Presses Interuniversitaires Européennes for the Commission of the European Communities and the European Centre for Work and Society 389p. (ECU 20 from European Centre for Work and Society, P.O.Box 3073, 6202 NB Maastricht, Netherlands) (Europe section)

FERNUNIVERSITÄT. ZIFF Papiere:
64. H.MÖHLE (1986) Aus- und Weiterbildung Erwachsener auf Hochschulebene in der DDR 21p. (Postfach 940, D-5800 Hagen, West Germany) (Germany (D.R.) section)

FURTHER EDUCATION UNIT (1986) Staff development for open learning tutors: an appraisal of staff development needs for the North Yorkshire Open Learning Scheme. Research director, G.R.Estell v,95p. ISBN 0-948621-19-2 (UK section)
_____ (1986) TVI- a handbook for producers and users of tutored video instruction [By] P.Fleetwood-Walker [and] F.Fletcher-Campbell [vii],55p. ISBN 0-948621-48-6 (DL4)
(FEU/PICKUP project reports obtainable from Publications Despatch Centre, DES, Honeypot Lane, Canons Park, Stanmore, Middlesex, HA7 1AZ)

J.L.GARCIA LLAMAS (1986) El estudio empírico sobre el rendimiento académico en la enseñanza a distancia. Madrid, Instituto de Ciencias de la Educación, Universidad Nacional de Educación a Distancia (Ciudad Universitaria, 28040 Madrid, Spain) 307p. ISBN 84-362-2045-5 (Estudios de educación a distancia, 5) (2,025 pts) (UNED section)

INSTITUT DE FORMATION DU CREDIT AGRICOLE MUTUEL Course materials comprising a printed correspondence text produced for a new economics course, 'Clefs de l'économie' (48 rue La Boétie, 75008 Paris, France) (Course materials section)

R.LEWIS (1986) The NEC guide to open learning. Cambridge, National Extension College (18 Brooklands Ave, Cambridge, CB2 2HN) 40p. ISBN 0-86082-756-9 (£4.95) (UK section)

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(Learning Systems, Scottish Council for Educational Technology, Dowanhill, 74 Victoria Crescent Rd, Glasgow, G12 9JN) (Course materials section)

N.R.McEWEN, C.R.BRANNIGAN and R.G.FARMER (1984) An investigation into the effectiveness of new methods of teaching and learning in higher education: a report for the Research Committee of Academic Board, City of Birmingham Polytechnic. Birmingham, Centre for Advanced Studies in Education, City of Birmingham Polytechnic (7 Church Rd, Edgbaston, Birmingham, B15 3SH) 28p. + 71 unnumbered pages of appendices (£2.00) (UK section)

NATIONAL INSTITUTE OF ADULT CONTINUING EDUCATION (1986) Year book of adult continuing education 1986-87 (NIACE, 19B De Montfort St, Leicester, LE1 7GE) 115p. ISSN 0265-1726 (£3.50) (Directories section)

OPEN UNIVERSITY Academic Computing Service, Educational Software Group (1986) System design for the computerisation of a subject-index for the International Centre for Distance Learning at the Open University 31p. (Enquiries welcomed from anyone interested in the system who has not already received a copy)

OPEN UNIVERSITY Institute of Educational Technology, IET papers:
252. A.W.BATES (1986) Creating a technologically innovative climate: the British Open University experience. [Prepared for] OECD Workshop on Promoting a Technologically Innovative Environment: Information and Motivation Schemes, OECD, Paris, 15th-17th December 1986 15p. Also available in French under the title Créer un climat propice à l'innovation technologique: l'expérience de l'Université ouverte en Grande-Bretagne
258. A.W.BATES (1986) Satellites for education and training: report on visit to India, November 28-December 13 1986 5p. (UK.OU.IET section)

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1. M.THORPE et al. (1986) Effective study in the Open University: the human dimension 10,[7]p. Also published with the title 'The human dimension in Open University study' in Open learning, vol.1, no.2, June 1986, pp.14-20
2. R.MASON with A.MORGAN (1986) The rough and the smooth: students' experiences of O.U. study 14p.
3. R.MELTON et al. (1986) Reactions of part-time tutors to financial cuts in the Open University 13p. Also published with the title 'Are our tutors satisfied?' in Open learning, vol.1, no.2, June 1986, pp.21-25
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S.PERRYMAN and M.FRESHWATER (1986) Industrial dimensions of open learning: a comparison of approaches adopted by Lucas Industries PLC and the Austin Rover Group. [Sheffield],OpenTech Unit (Moorfoot, Sheffield, S1 4BR) 13p. (UK section)

S.ROWLANDS and N.ROWLANDS (1986) Into open learning. London, Open Learning Systems Ltd (6 South Molton St, London, W1Y 2AX) 49p. ISBN 1-86984-900-0 (£6.95) (UK section)

E.SAGAR and A.STRANG (1985) The student experience: a case study of technicians in open learning. Horsham, Roffey Park Management College (Forest Rd, Horsham, West Sussex, RH12 4TD) 34p. ISBN 0-86082-904-9 (£4.00) (UK section)

UNIT FOR THE DEVELOPMENT OF ADULT CONTINUING EDUCATION (1986) The challenge of change: developing educational guidance for adults. Leicester, National Institute of Adult Continuing Education (19B De Montfort St, Leicester, LE1 7GE) 106p. ISBN 0900-559-54-3 (UK section)

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UNIVERSITY OF LONDON (1986) The External System: a background paper 7p. (S.B.Crooks, Secretary for External Students, University of London, Senate House, Malet St, London, WC1E 7HU) (UK section)

G.WACE (1986) Never mind the technology...think of the information! A pack to introduce teachers to information technology. London, Council for Educational Technology (3 Devonshire St, London, W1N 2BA) 6 modules (of around 10 pages each) and 4 recommended texts ISBN 0-86184-159-X (£4.50) (UK section)

A DISTANCIA: REVISTA DE LA UNIVERSIDAD NACIONAL DE EDUCACION A DISTANCIA, no.10, Mayo 1986 (Gabinete de la Prensa de la UNED, Ciudad Universitaria, 28040 Madrid, Spain) (Spain. UNED section)

ADULT EDUCATION, vol.59, no.3, December 1986 (NIACE, 19B De Montfort St, Leicester, LE1 7GE) (Journals section)

DELTA: THE JOINT STUDY PROGRAMME NEWSLETTER OF THE COMMISSION, 2/86 (Subscription details from the Office for Official Publications of the European Communities, L-2985 Luxemburg) (Europe section)

EDUCA: THE DIGEST FOR VOCATIONAL EDUCATION AND TRAINING, no.67, November 1986; no.68, December 1986 (Subscription details from Robin Williams, 276 High St, Guildford, Surrey, GUI 3JL) (UK section)

EUROTECNET, no.2, September 1986 (European Centre for Work and Society, P.O.Box 3073, 6202 NB Maastricht, Netherlands) (Europe section)

FOCUS ON ADULT TRAINING, no.9, Nov/Dec1986 (Distribution Manager, MSC (Dept FATN), Room E825, Moorfoot, Sheffield, S1 4BR) (UK section)

HIGHER EDUCATION IN EUROPE, vol.XI, no.1, 1986, 'Higher education and international mobility'; no.2, 1986, 'Comparability of higher education systems'; no.3, 1986, 'Higher education and development' (Subscription details from European Centre for Higher Education (CEPES), 39 Stirbei Voda St, R-70732 Bucharest, Romania) (Europe section)

MANPOWER POLICY AND PRACTICE, vol.2, no.2, Winter 1986 (£22.50 from Gower Publishing, Gower House, Croft Rd, Aldershot, Hampshire, GU11 3HR) Includes Editorial entitled 'Open learning: blockbuster or one-night wonder?', pp.2-3 (UK section)

NIACE NEWSLETTER, no.7, November 1986 (National Institute of Adult Continuing Education, 19B De Montfort St, Leicester, LE1 7GE) (UK section)

OLS NEWS, no.18, Dec 86 (Subscription details from the Editor, 10 Metuchen Way, Hedge End, Southampton, SO3 4JZ) (UK section)

RADIO Y EDUCACION ECCA DE ADULTOS: BOLETIN CUATRIMESTRAL ECCA, no.3, Septiembre/Diciembre 86 (Radio ECCA, Apdo 994, 35080 Las Palmas de Gran Canaria, Spain) (Spain section)

MIDDLE EAST

al-QUDS OPEN UNIVERSITY (1986) al-Quds Open University: a new horizon in Arab higher education (P.O.Box 950408, Amman, Jordan) 148p. Text in Arabic, abstract in English (Middle East. al-Quds Open University section)

_____ (1986) An introduction to open learning systems of higher education 125p. (DL1)

_____ (1986) The student in open learning universities 134p. Text in Arabic, abstract in English (DL2)

NORTH AMERICA

ANNENBERG/CPB PROJECT Executive Summaries of Reports:
- (1985) Nebraska videodisc science laboratory simulations 14p.
- (1985) Research on student uses of the Annenberg/CPB telecourses in the Fall of 1984 16p.
- (1985) A study of telecourse students 1984 4p.
(1111 Sixteenth St, N.W., Washington, D.C. 20036, USA) (United States section)

ATHABASCA UNIVERSITY (1986) Staff publications and research interests 1983-85 47p. (Office of the Vice-President Academic, Athabasca University, Box 10,000, Athabasca, Alberta, T0G 2RO, Canada) (Canada. AU section)

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EMPIRE STATE COLLEGE (1985) A report on the electronic university of the future: a planning colloquy presented by Empire State College, SUNY (Saratoga Springs, NY 12866, USA) 36p. (United States. ESC section)

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I.MUGRIDGE and D.KAUFMAN (eds.) (1986) Distance education in Canada. London, Croom Helm vii,317p. ISBN 0-7099-4619-8 (£19.95) (Canada section)

B.C.READY and R.D.SACCHETTI (1986) The independent s 'y catalog: NUCEA's guide to independent study through correspondence instruction 1986-1988. Princeton, Peterson's Guides (NUCEA Book Order Department, Peterson's Guides, P.O.Box 2123, Princeton, New Jersey 08543-2123, USA) 113p ISBN 0-87866-379-7 ($8.95 + $1.25 postage/handling) (United States section)

AMERICAN INDEPENDENT STUDY, vol.1, no.2, November 1986 (American Independent Study, Brigham Young University, 206 Harman Building, Provo, Utah 84602, USA) (United States section)

DISTANCE TEACHING NEWS: A NEWSLETTER FOR CORRESPONDENCE INSTRUCTORS AT THE UNIVERSITY OF WATERLOO, vol.1, no.1, November 1985; no.2, April 1986; no.3, October 1986 (Canada section)

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